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## GASP Cloud- and Particle-Encounter Statistics, and Their Application to LFC Aircraft Studies

*Volume II: Appendixes*

ON REFERENCE

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Richard E. Davis, and James D. Holdeman

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# GASP Cloud- and Particle-Encounter Statistics, and Their Application to LFC Aircraft Studies

*Volume II: Appendixes*

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## SUMMARY

Summary statistics, tabulations, and variability studies are presented for the entire cloud observation archive - nearly 88 000 samples - from the NASA Global Atmospheric Sampling Program (GASP), which was conducted from 1975 to 1979 aboard four commercial airliners in regular service. Summary statistics, tabulations, and variability studies are also presented for GASP particle-concentration data - nearly 56 000 samples - gathered concurrently with the cloud observations. Clouds were encountered in about 15 percent of the data samples, but the probability of cloud encounter is shown to vary significantly with altitude, latitude, and distance from the tropopause, and less significantly with season. Several meteorological circulation features, such as the Intertropical Convergence Zone, are apparent in the latitudinal distribution of cloud cover. The cloud-encounter statistics are shown to be consistent with the classical mid-latitude cyclone model, with more clouds encountered in the upper troposphere in highs than in lows. Observations of clouds spaced more closely than 90 minutes of flight time are shown to be statistically dependent.

The number density of particles with a diameter greater than 3  $\mu\text{m}$  also varies with time and location. It depends primarily on the horizontal extent of cloudiness, that is, the portion of each sampling interval that is spent within clouds. Thus, the variability of time in clouds and the variability of particle number density are closely related.

The summary statistics for cloud and particle encounter are utilized to estimate the frequency of cloud encounter on long-range commercial transport routes and to assess the probability and extent of laminar flow (LF) loss due to cloud or particle encounter by aircraft utilizing laminar flow control (LFC). The observations of route-averaged time in clouds are found to fit an empirical model based on a gamma probability density function; this model can be used to estimate the probability of extended cloud encounter along a route. The analysis in this report shows that the probability of LF loss in clear air is negligible and that the probability of extended cloud encounter, and associated significant loss of LF, is too low, of itself, to make LFC impractical.

For user convenience, this report is presented in two volumes. Volume I contains the narrative, analysis, and conclusions. Volume II is composed of five appendixes, as follows: A - GASP Cloud and Particle Instrumentation; B - Individual Flight Summaries; C - Independence of Cloud Observation Periods; D - Cloud-Encounter Statistics as Functions of Latitude, Longitude, Northern Hemisphere Season, and Altitude; and E - Cloud-Encounter Statistics as Functions of Latitude, Longitude, Northern Hemisphere Season, and Distance From the National Meteorological Center (NMC) Tropopause.

## APPENDIX A

### GASP CLOUD AND PARTICLE INSTRUMENTATION

GASP cloud and particle data were obtained with a particle counter (Royco Instruments, Inc., model number 245), which used a forward light-scattering technique to measure the number of airborne particles larger than  $0.3\text{ }\mu\text{m}$  in diameter. The operation was similar to that of the unit described in reference 33 (Vol. I). As the air sample containing particles passed through the sensor, it was illuminated by a light beam, and light scattered by the particles in a forward direction was detected by a photomultiplier tube. The sensor thus operated at night as well as in day. Under normal operating conditions, each particle caused a pulse in the photomultiplier output. The particle concentration was determined by counting the number of output pulses during the counting period and then dividing that number by the corresponding sample volume flow during the same period, corrected to altitude-ambient conditions. Particle-counter volumetric flow rate was approximately 30 liters per minute and the counting period was normally 1 minute.

The particle count accumulated during the sampling period was separated (within the instrument) into five particle-diameter ranges -  $0.3$  to  $0.45\text{ }\mu\text{m}$ ,  $0.45$  to  $0.65\text{ }\mu\text{m}$ ,  $0.65$  to  $1.4\text{ }\mu\text{m}$ ,  $1.4$  to  $3.0\text{ }\mu\text{m}$ , and  $>3.0\text{ }\mu\text{m}$  - based on the amplitude of the pulse. Each instrument was calibrated by the manufacturer for particle-size detection. An aerosol generator and latex particles were used at NASA Lewis Research Center to check each instrument.

The GASP particle counters had two discrete output signals to indicate proper flight operation. One of these indicated that the light source had remained on during the full counting period, and the second verified that the automatic-gain adjustment was completed prior to each counting cycle. The sample flow rate through the sensing unit was measured with a choked venturi.

During laboratory evaluation of a flight-test prototype of this instrument, it was found that the sample volume was not receiving uniform illumination. This resulted in a substantial ambiguity in the number and sizes of particles counted. (See ref. 34, Vol. I.) A detailed mapping of the sample-volume light field was not made for any of the instruments flown on GASP airliners, nor has any attempt been made to correct or normalize the data. The particle number density data reported herein are subject to variations between instruments due to differences in sample-volume illumination. These differences may be on the order of +300 percent to -70 percent ( $\pm 1/2$  cycle) in particle count. (See refs. 28 to 33, Vol. I.)



## APPENDIX B

### INDIVIDUAL FLIGHT SUMMARIES

DEP - airport of departure

ARR - airport of arrival

IM/ID/IY - date of departure (month/day/year)

Note: \* following date means departure and arrival airports are reversed for the flight.

CODE: XYZ

<u>X = Aircraft code</u>	<u>Y = Particle counter code</u>	<u>Z = Moisture sensor code</u>
A = PANAM (N533PA)	A = #3	A = Aluminum oxide
B = PANAM (N655PA)	B = #4	B = Chilled mirror
C = UAL (N4711U)	C = #6	
D = QANTAS (VH-EBE)	D = #7	

AVFL - average flight altitude, kft

EXHI - highest flight altitude, kft

EXLO - lowest flight altitude, kft

ALAT - average latitude (positive for degrees N, negative for degrees S)

EXTN - northernmost data point (degrees latitude)

EXTS - southernmost data point (degrees latitude)

FLT TOT - includes all data on flight

IN CLR - in clear air, only observation periods with time in cloud equal to zero

NOT CLR - only observation periods with time in cloud greater than zero

NUMBER OF OBS - CLD - cloud-encounter data not missing

PD5 - cloud-encounter data not missing and particle density data present

OZ - cloud-encounter data not missing and ozone data present

H2O - cloud-encounter data not missing and water vapor data present

H2S - relative humidity equals 100 percent

## APPENDIX B

AVERAGES FOR THE FLIGHT - %TIC - average percentage of time in cloud per data sample

PATCHES - average number of cloud patches per data sample

PD5 - average particle concentration or number density, if available (particles/m<sup>3</sup>)

OZ - average ozone mixing ratio (parts per billion by volume)

RH - average relative humidity, percent

H2O - average water vapor mixing ratio (parts per million by volume)

TROP N - when available, number of observation periods in the troposphere

STRAT N - when available, number of observation periods in the stratosphere

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT			
						CLD	PD5	OZ	H2O	H2S	XTIC	PATCHES	PD5	OZ	RH	H2O	N	N		
AKL-AKL																				
	5/24/78	ABB	324 -28	331 -23	268 -36	FLT IN NOT	TOT: CLR: CLR:	12 12 0	12 12 0	6 6 0	4 4 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.125E+02 .125E+02 0.	41 41 0	33 33 0	59 59 0	12 12 0	0 0 0
AKL-CPT																				
	10/29/77	* ABB	384 -64	430 -36	307 -88	FLT IN NOT	TOT: CLR: CLR:	60 59 1	0 0 0	10 9 1	0 0 0	0 0 0	.4 0.0 23.5	.0 0.0 1.0	0. 0. 0.	425 465 64	0 0 0	0 0 0	9 8 1	51 51 0
AKL-HNL																				
	11/13/78	* BBB	336 -9	351 18	247 -36	FLT IN NOT	TOT: CLR: CLR:	90 61 29	90 61 29	58 40 18	50 38 12	5 0 5	18.7 0.0 58.0	.9 0.0 2.9	.443E+05 .406E+03 .137E+06	37 36 39	54 43 88	138 109 229	90 61 29	0 0 0
AKL-LAX																				
	5/21/78	* ABB	373 0	390 33	275 -35	FLT IN NOT	TOT: CLR: CLR:	140 140 0	140 140 0	93 93 0	70 70 0	27 27 0	0.0 0.0 0.0	0.0 0.0 0.0	.428E+01 .428E+01 0.	45 45 0	70 70 0	60 60 0	140 140 0	0 0 0
	5/22/78	ABB	391 0	412 32	293 -36	FLT IN NOT	TOT: CLR: CLR:	129 129 0	129 129 0	83 83 0	74 74 0	38 38 0	0.0 0.0 0.0	0.0 0.0 0.0	.329E+02 .329E+02 0.	81 81 0	81 81 0	50 50 0	123 123 0	6 6 0
	5/23/78	* ABB	374 1	391 33	273 -35	FLT IN NOT	TOT: CLR: CLR:	139 138 1	139 138 1	93 93 0	60 60 0	12 12 0	.0 0.0 .4	.0 0.0 1.0	.573E+02 .575E+02 .215E+02	53 53 0	67 67 0	65 65 0	134 133 1	5 5 0
	5/24/78	ABB	386 7	411 32	370 -18	FLT IN NOT	TOT: CLR: CLR:	94 94 0	94 94 0	60 60 0	48 48 0	3 3 0	0.0 0.0 0.0	0.0 0.0 0.0	.631E+01 .631E+01 0.	60 80 0	48 48 0	34 34 0	85 85 0	9 9 0
AKL-SFO																				
	1/ 1/77	* AAA	386 1	410 37	270 -35	FLT IN NOT	TOT: CLR: CLR:	140 122 18	0 0 0	91 80 11	115 100 15	36 24 12	5.4 0.0 42.0	.4 0.0 3.3	0. 0. 0.	64 70 24	71 67 99	40 39 44	133 115 18	7 7 0
	2/ 4/77	AAA	377 1	410 36	278 -35	FLT IN NOT	TOT: CLR: CLR:	125 101 24	125 101 24	0 0 0	104 84 20	7 0 7	11.4 0.0 59.3	.6 0.0 3.0	.104E+06 .675E+02 .540E+06	0 0 0	44 34 87	55 38 125	115 91 24	10 10 0
	3/31/77	* AAA	383 -3	390 36	263 -9	FLT IN NOT	TOT: CLR: CLR:	18 10 8	18 10 8	0 0 0	14 7 7	13 6 7	13.7 0.0 30.7	2.2 0.0 4.9	.106E+06 .166E+03 .238E+06	0 0 0	100 99 100	53 52 54	0 0 0	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR THE FLIGHT				OZ RH H2O			TROP N	STRAT N
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5						
AKL-SFO (CONT.)																				
5/ 5/77	*	AAA	376 1	392 37	239 -35	FLT IN NOT	TOT: CLR: CLR:	141 115 26	141 115 26	91 77 14	0 0 0	6.1 0.0 32.9	.5 0.0 2.8	.188E+03 .124E+03 .101E+06	73 86 34	0 0 0	0 0 0	126 100 26		15 15 0
5/ 6/77		AAA	381 5	410 37	257 -35	FLT IN NOT	TOT: CLR: CLR:	128 102 26	128 102 26	85 68 17	0 0 0	5.7 0.0 27.9	.5 0.0 2.7	.143E+05 .275E+03 .692E+05	127 151 34	0 0 0	0 0 0	110 85 25		18 17 1
5/19/77	*	AAA	365 -2	391 36	234 -36	FLT IN NOT	TOT: CLR: CLR:	58 45 13	58 45 13	31 24 7	0 0 0	8.8 0.0 39.3	.6 0.0 2.5	.827E+05 .365E+03 .368E+06	48 50 36	0 0 0	0 0 0	58 45 13		0 0 0
5/20/77		AAA	368 -2	410 32	318 -35	FLT IN NOT	TOT: CLR: CLR:	52 38 14	52 38 14	33 23 10	0 0 0	11.1 0.0 41.4	.9 0.0 3.4	.256E+05 .108E+03 .947E+05	48 50 43	0 0 0	0 0 0	50 36 14		2 2 0
5/21/77	*	AAA	376 -2	391 35	337 -35	FLT IN NOT	TOT: CLR: CLR:	66 56 10	66 56 10	46 38 8	0 0 0	3.4 0.0 22.5	.6 0.0 3.8	.649E+05 .584E+02 .428E+06	52 54 45	0 0 0	0 0 0	66 56 10		0 0 0
6/30/77	*	ACA	370 1	392 37	240 -35	FLT IN NOT	TOT: CLR: CLR:	136 103 33	0 0 0	0 0 0	0 0 0	12.4 0.0 51.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	136 103 33		0 0 0
7/ 1/77		ACA	388 3	420 37	293 -35	FLT IN NOT	TOT: CLR: CLR:	122 106 16	0 0 0	0 0 0	0 0 0	5.6 0.0 42.5	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	122 106 16		0 0 0
7/ 2/77	*	ACA	367 0	390 36	270 -36	FLT IN NOT	TOT: CLR: CLR:	136 103 33	0 0 0	0 0 0	0 0 0	8.4 0.0 34.5	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	136 103 33		0 0 0
9/29/77	*	ABA	381 2	410 37	322 -35	FLT IN NOT	TOT: CLR: CLR:	132 114 18	0 0 0	80 71 9	0 0 0	3.5 0.0 25.6	.4 0.0 3.3	0. 0. 0.	47 49 26	0 0 0	0 0 0	122 104 18		10 10 0
9/30/77		ABA	393 2	413 37	268 -35	FLT IN NOT	TOT: CLR: CLR:	116 104 12	0 0 0	74 68 6	0 0 0	2.7 0.0 26.6	.2 0.0 1.8	0. 0. 0.	59 60 41	0 0 0	0 0 0	105 94 11		11 10 1
10/ 1/77	*	ABA	373 -1	390 36	232 -36	FLT IN NOT	TOT: CLR: CLR:	117 108 9	0 0 0	77 72 5	0 0 0	.7 0.0 8.6	.3 0.0 3.4	0. 0. 0.	59 61 32	0 0 0	0 0 0	108 99 9		9 9 0
10/30/77		ABB	393 0	410 34	315 -35	FLT IN NOT	TOT: CLR: CLR:	46 35 11	0 0 0	2 2 0	0 0 0	7.7 0.0 32.4	.7 0.0 2.7	0. 0. 0.	112 112 0	0 0 0	0 0 0	46 35 11		0 0 0
12/16/76	*	AAA	386 4	410 37	277 -33	FLT IN NOT	TOT: CLR: CLR:	121 84 37	0 0 0	77 51 26	0 0 0	11.5 0.0 37.6	.6 0.0 1.9	0. 0. 0.	50 64 24	0 0 0	0 0 0	121 84 37		0 0 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT				TROP	STRAT
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
AKL-SYD (CONT.)																			
5/ 5/77		AAA	382 -36	391 -34	243 -37	FLT TOT: IN CLR: NOT CLR:		31 30 1	31 30 1	19 19 0	0 0 0	1.7 0.0 51.4	.1 0.0 4.0	0. 0. 0.	89 89 0	0 0 0	0 0 0	18 17 1	13 13 0
5/ 6/77 *		AAA	400 -36	410 -34	281 -37	FLT TOT: IN CLR: NOT CLR:		21 20 1	21 20 1	13 13 0	0 0 0	.0 0.0 .8	.0 0.0 1.0	.315E+01 0. .662E+02	98 98 0	0 0 0	0 0 0	2 1 1	19 19 0
5/19/77		AAA	411 -36	430 -34	389 -37	FLT TOT: IN CLR: NOT CLR:		11 7 4	11 7 4	7 4 3	0 0 0	7.6 0.0 20.8	2.0 0.0 5.5	.183E+05 .230E+02 .502E+05	115 165 49	0 0 0	0 0 0	10 6 4	1 1 0
5/20/77 *		AAA	380 -36	410 -34	201 -37	FLT TOT: IN CLR: NOT CLR:		13 12 1	13 12 1	8 7 1	0 0 0	.5 0.0 6.3	.2 0.0 2.0	.492E+01 .533E+01 0.	119 133 21	0 0 0	0 0 0	13 12 1	0 0 0
5/21/77		AAA	382 -36	391 -34	281 -37	FLT TOT: IN CLR: NOT CLR:		14 14 0	14 14 0	4 4 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	85 85 0	0 0 0	0 0 0	11 11 0	3 3 0
5/21/78		ABB	423 -36	430 -34	305 -37	FLT TOT: IN CLR: NOT CLR:		27 27 0	27 27 0	17 17 0	9 9 0	0.0 0.0 0.0	0.0 0.0 0.0	.534E+01 .534E+01 0.	183 183 0	41 41 0	36 36 0	1 1 0	26 26 0
5/22/78 *		ABB	405 -36	411 -34	321 -37	FLT TOT: IN CLR: NOT CLR:		22 22 0	22 22 0	12 12 0	5 5 0	0.0 0.0 0.0	0.0 0.0 0.0	.663E+01 .663E+01 0.	207 207 0	30 30 0	26 26 0	2 2 0	20 20 0
5/24/78 *		ABB	405 -36	410 -34	332 -37	FLT TOT: IN CLR: NOT CLR:		20 20 0	20 20 0	11 11 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.543E+01 .543E+01 0.	257 257 0	9 9 0	7 7 0	1 1 0	19 19 0
6/30/77		ACA	422 -36	430 -34	364 -37	FLT TOT: IN CLR: NOT CLR:		29 29 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	1 1 0	28 28 0
7/ 1/77 *		ACA	361 -36	370 -34	244 -37	FLT TOT: IN CLR: NOT CLR:		21 21 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	5 5 0	16 16 0
7/ 2/77		ACA	423 -36	430 -34	324 -37	FLT TOT: IN CLR: NOT CLR:		26 25 1	0 0 0	0 0 0	0 0 0	.0 0.0 .4	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	1 1 0	25 24 1
9/29/77		ABA	369 -36	391 -34	245 -37	FLT TOT: IN CLR: NOT CLR:		21 20 1	0 0 0	13 12 1	0 0 0	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.	202 194 293	0 0 0	0 0 0	4 4 0	17 16 1
9/30/77 *		ABA	404 -36	412 -34	319 -37	FLT TOT: IN CLR: NOT CLR:		22 21 1	0 0 0	14 14 0	0 0 0	.2 0.0 3.5	.4 0.0 8.0	0. 0. 0.	152 152 0	0 0 0	0 0 0	1 1 0	21 20 1

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT	
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
AKL-SYD (CONT.)																		
10/ 1/77	ABA	404 -36	411 -34	327 -37	FLT IN NOT	TOT: CLR: CLR:	27 25 2	0 0 0	17 16 1	0 0 0	1.6 0.0 22.2	.3 0.0 3.5	0. 0. 0.	327 324 379	0 0 0	0 0 0	2 1 1	25 24 1
11/24/76 *	DDA	326 -36	330 -34	265 -37	FLT IN NOT	TOT: CLR: CLR:	21 18 3	0 0 0	0 0 0	0 0 0	5.3 0.0 37.1	.8 0.0 5.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	21 18 3	0 0 0
11/25/76	DDA	372 -36	390 -34	307 -37	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	24 24 0	4 4 0
11/13/78	BBB	322 -36	330 -34	217 -37	FLT IN NOT	TOT: CLR: CLR:	26 26 0	26 26 0	16 16 0	9 9 0	0.0 0.0 0.0	0.0 0.0 0.0	.415E+02 .415E+02 0.	150 150 0	61 61 0	58 58 0	26 26 0	0 0 0
12/ 7/76	DDA	343 -36	350 -34	244 -37	FLT IN NOT	TOT: CLR: CLR:	26 22 4	0 0 0	0 0 0	0 0 0	5.9 0.0 38.5	.7 0.0 4.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	26 22 4	0 0 0
12/ 7/76 *	DDA	326 -36	330 -34	263 -37	FLT IN NOT	TOT: CLR: CLR:	21 17 4	0 0 0	0 0 0	0 0 0	6.6 0.0 34.9	1.0 0.0 5.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	21 17 4	0 0 0
12/ 8/76 *	DDA	325 -36	330 -34	235 -37	FLT IN NOT	TOT: CLR: CLR:	21 12 9	0 0 0	0 0 0	0 0 0	8.3 0.0 19.3	1.0 0.0 2.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	21 12 9	0 0 0
12/ 8/76	DDA	338 -36	350 -34	236 -37	FLT IN NOT	TOT: CLR: CLR:	25 9 16	0 0 0	0 0 0	0 0 0	23.4 0.0 36.6	2.4 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	25 9 16	0 0 0
12/15/76	DDA	342 -36	351 -33	230 -37	FLT IN NOT	TOT: CLR: CLR:	27 17 10	0 0 0	0 0 0	0 0 0	23.9 0.0 64.5	1.1 0.0 2.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/15/76 *	DDA	326 -36	330 -34	266 -37	FLT IN NOT	TOT: CLR: CLR:	21 20 1	0 0 0	0 0 0	0 0 0	.9 0.0 18.4	.1 0.0 3.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/16/76	AAA	423 -36	430 -34	340 -37	FLT IN NOT	TOT: CLR: CLR:	27 25 2	0 0 0	15 14 1	0 0 0	.5 0.0 6.1	.1 0.0 1.5	0. 0. 0.	149 153 89	0 0 0	0 0 0	25 23 2	2 2 0
12/17/76 *	AAA	402 -36	409 -34	321 -37	FLT IN NOT	TOT: CLR: CLR:	21 20 1	0 0 0	14 13 1	0 0 0	2.1 0.0 43.5	.0 0.0 1.0	0. 0. 0.	167 174 80	0 0 0	0 0 0	15 14 1	6 6 0
12/18/76	AAA	393 -36	410 -34	232 -37	FLT IN NOT	TOT: CLR: CLR:	29 29 0	0 0 0	19 19 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	267 267 0	0 0 0	0 0 0	4 4 0	25 25 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
AKL-SYD (CONT.)																			
12/23/76		AAA	419 -36	432 -34	312 -37	FLT TOT: IN CLR: NOT CLR:	23 21 2	0 0 0	0 0 0	0 0 0	0 0 0	2.4 0.0 27.1	.1 0.0 1.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	13 11 2	10 10 0
12/24/76	*	AAA	399 -36	410 -35	284 -37	FLT TOT: IN CLR: NOT CLR:	12 10 2	0 0 0	6 6 0	0 0 0	0 0 0	4.9 0.0 29.6	.3 0.0 2.0	0. 0. 0.	179 179 0	0 0 0	0 0 0	8 6 2	4 4 0
12/25/76		AAA	421 -36	430 -34	281 -37	FLT TOT: IN CLR: NOT CLR:	28 28 0	0 0 0	16 16 0	22 22 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	121 121 0	63 63 0	42 42 0	28 28 0	0 0 0
12/27/76		DDA	309 -36	310 -34	274 -37	FLT TOT: IN CLR: NOT CLR:	27 16 11	0 0 0	0 0 0	0 0 0	0 0 0	19.6 0.0 48.0	1.4 0.0 3.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	27 16 11	0 0 0
12/27/76	*	DDA	324 -36	330 -34	248 -37	FLT TOT: IN CLR: NOT CLR:	23 16 7	0 0 0	0 0 0	0 0 0	0 0 0	14.4 0.0 47.3	1.0 0.0 3.1	0. 0. 0.	0 0 0	0 0 0	0 0 0	23 16 7	0 0 0
12/30/76		AAA	417 -36	430 -34	201 -37	FLT TOT: IN CLR: NOT CLR:	20 28 0	0 0 0	15 15 0	21 21 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	314 314 0	47 47 0	18 18 0	18 18 0	10 10 0
12/31/76	*	AAA	362 -36	371 -34	207 -37	FLT TOT: IN CLR: NOT CLR:	24 24 0	0 0 0	16 16 0	20 20 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	175 175 0	65 65 0	35 35 0	24 24 0	0 0 0
AMS-ATH																			
1/20/77		DDA	306 46	331 52	199 39	FLT TOT: IN CLR: NOT CLR:	26 17 9	26 17 9	16 9 7	0 0 0	0 0 0	12.7 0.0 36.7	.7 0.0 2.0	.237E+05 .108E+03 .683E+05	73 87 55	0 0 0	0 0 0	26 17 9	0 0 0
AMS-BAH																			
12/21/76		DDA	325 40	330 52	199 27	FLT TOT: IN CLR: NOT CLR:	57 50 7	0 0 0	0 0 0	0 0 0	0 0 0	4.8 0.0 38.8	.4 0.0 3.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
ATH-BAH																			
1/21/77		DDA	288 32	290 36	227 27	FLT TOT: IN CLR: NOT CLR:	34 34 0	34 34 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.748E+02 .748E+02 0.	69 69 0	0 0 0	0 0 0	34 34 0	0 0 0

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH H2O			TRCP	STRAT
						CLD	PD5	OZ	H2O	H2S	ATIC	PATCHES	PD5	OZ	RH	H2O	N	N			
ATH-BEG																					
8/19/76	*	DDA	319 41	330 43	264 39	FLT IN NOT	TOT: CLR: CLR:	8 7 1	0 0 0	4 4 0	0 0 0	8.8 0.0 70.2	.9 0.0 7.0	0. 0. 0.	130 130 0	0 0 0	0 0 0	8 7 1	0 0 0		
8/19/76		DDA	299 42	310 44	271 40	FLT IN NOT	TOT: CLR: CLR:	6 5 1	0 0 0	2 1 1	0 0 0	.1 0.0 .4	.2 0.0 1.0	0. 0. 0.	94 105 83	0 0 0	0 0 0	6 5 1	0 0 0		
ATH-BGR																					
11/ 9/78		BBB	320 47	370 50	286 39	FLT IN NOT	TOT: CLR: CLR:	96 76 20	96 76 20	49 36 13	52 43 9	4 2 2	8.4 0.0 40.2	.4 0.0 2.0	.123E+05 .684E+02 .610E+05	48 53 34	48 42 78	46 40 77	96 76 20	0 0 0	
ATH-BKK																					
8/22/76	*	DDA	334 25	350 37	223 14	FLT IN NOT	TOT: CLR: CLR:	102 82 20	0 0 0	65 54 11	0 0 0	8.9 0.0 45.1	.6 0.0 3.3	0. 0. 0.	47 52 27	0 0 0	0 0 0	102 82 20	0 0 0		
8/23/76		DDA	327 24	370 36	247 14	FLT IN NOT	TOT: CLR: CLR:	104 68 36	0 0 0	70 46 24	0 0 0	13.5 0.0 39.1	1.3 0.0 3.8	0. 0. 0.	43 50 30	0 0 0	0 0 0	104 68 36	0 0 0		
8/29/76	*	DDA	326 24	351 37	231 14	FLT IN NOT	TOT: CLR: CLR:	106 66 40	0 0 0	63 36 27	0 0 0	18.0 0.0 47.8	1.5 0.0 4.1	0. 0. 0.	33 42 21	0 0 0	0 0 0	106 66 40	0 0 0		
8/30/76		DDA	329 24	371 36	241 14	FLT IN NOT	TOT: CLR: CLR:	103 57 46	0 0 0	68 36 32	0 0 0	26.7 0.0 59.7	1.7 0.0 3.8	0. 0. 0.	39 51 25	0 0 0	0 0 0	103 57 46	0 0 0		
ATH-DAM																					
8/19/76	*	DDA	336 35	350 37	243 34	FLT IN NOT	TOT: CLR: CLR:	17 17 0	0 0 0	10 10 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	69 69 0	0 0 0	0 0 0	17 17 0	0 0 0		
12/ 5/76	*	DDA	334 35	350 37	199 34	FLT IN NOT	TOT: CLR: CLR:	19 3 16	0 0 0	0 0 0	0 0 0	43.3 0.0 51.4	3.2 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	19 3 16	0 0 0		
ATH-DEL																					
8/19/76		DDA	306 32	331 36	243 28	FLT IN NOT	TOT: CLR: CLR:	59 59 0	0 0 0	36 36 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	62 62 0	0 0 0	0 0 0	59 59 0	0 0 0		

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
ATH-FCO																	
2/22/77	DDA	340 39	350 42	265 38	FLT IN NOT	TOT: CLR: CLR:	14 2 12	14 2 12	8 1 7	0 0 0	66.0 0.0 77.0	2.5 0.0 2.9	.166E+06 .323E+02 .193E+06	57 75 55	0 0 0	0 0 0	0 0 0
8/10/76	DDA	297 39	310 41	195 38	FLT IN NOT	TOT: CLR: CLR:	11 11 0	0 0 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	90 90 0	0 0 0	0 0 0	11 11 0
8/10/76 *	DDA	313 40	330 41	213 38	FLT IN NOT	TOT: CLR: CLR:	10 10 0	0 0 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	90 90 0	0 0 0	0 10 0	0 0 0
8/15/76	DDA	330 39	351 41	221 38	FLT IN NOT	TOT: CLR: CLR:	12 12 0	0 0 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	89 89 0	0 0 0	0 0 0	12 12 0
8/15/76 *	DDA	313 40	330 41	232 38	FLT IN NOT	TOT: CLR: CLR:	10 6 4	0 0 0	6 4 2	0 0 0	9.4 0.0 23.4	.7 0.0 1.8	0. 0. 0.	52 56 45	0 0 0	0 0 0	10 6 4
12/ 5/76 *	DDA	316 40	330 41	215 38	FLT IN NOT	TOT: CLR: CLR:	12 10 2	0 0 0	0 0 0	0 0 0	11.7 0.0 70.4	.7 0.0 4.0	0. 0. 0.	0 0 0	0 0 0	0 7 2	3 3 0
12/ 5/76	DDA	301 39	310 42	207 38	FLT IN NOT	TOT: CLR: CLR:	14 8 6	0 0 0	0 0 0	0 0 0	24.2 0.0 56.5	1.9 0.0 4.5	0. 0. 0.	0 0 0	0 0 0	0 8 6	0 0 0
ATH-JFK																	
11/ 9/78 *	BBB	322 47	371 52	209 39	FLT IN NOT	TOT: CLR: CLR:	94 68 26	94 68 26	60 43 17	48 39 9	13.8 0.0 49.8	.7 0.0 2.4	.406E+05 .951E+02 .147E+06	59 66 41	53 45 86	56 34 151	94 68 26
ATH-LHR																	
8/23/76	DDA	373 46	391 52	333 40	FLT IN NOT	TOT: CLR: CLR:	29 29 0	0 0 0	18 18 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	210 210 0	0 0 0	0 0 0	23 23 0
8/23/76 *	DDA	363 46	370 51	325 39	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	19 19 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	146 146 0	0 0 0	0 0 0	17 17 0
8/30/76	DDA	280 46	280 52	277 40	FLT IN NOT	TOT: CLR: CLR:	27 19 8	0 0 0	16 11 5	0 0 0	12.5 0.0 42.4	1.9 0.0 6.4	0. 0. 0.	72 74 68	0 0 0	0 0 0	27 19 8

DEP-ARR		CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
IM/ID/IY						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5						
ATH-LHR (CONT.)																		
8/30/76	* DDA	364 46	371 51	274 39	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	17 17 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	135 135 0	0 0 0	0 0 0	22 22 0	6 6 0
ATH-THR																		
2/22/77	DDA	326 35	330 36	265 34	FLT IN NOT	TOT: CLR: CLR:	33 26 7	33 26 7	21 18 3	0 0 0	4.8 0.0 22.6	.4 0.0 2.0	.253E+05 .771E+02 .119E+06	99 109 35	0 0 0	0 0 0	0 0 0	0 0 0
2/22/77	* DDA	347 35	349 37	294 34	FLT IN NOT	TOT: CLR: CLR:	35 33 2	35 33 2	21 20 1	0 0 0	2.8 0.0 48.4	.0 0.0 .5	.810E+04 .203E+02 .142E+06	148 152 64	0 0 0	0 0 0	0 0 0	0 0 0
8/10/76	* DDA	342 35	370 37	205 34	FLT IN NOT	TOT: CLR: CLR:	33 33 0	0 0 0	21 21 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	55 55 0	0 0 0	0 0 0	33 33 0	0 0 0
8/11/76	DDA	327 35	330 36	262 34	FLT IN NOT	TOT: CLR: CLR:	30 30 0	0 0 0	19 19 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	52 52 0	0 0 0	0 0 0	30 30 0	0 0 0
8/15/76	DDA	319 35	331 37	208 33	FLT IN NOT	TOT: CLR: CLR:	31 31 0	0 0 0	19 19 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	58 58 0	0 0 0	0 0 0	31 31 0	0 0 0
8/15/76	* DDA	346 35	351 37	263 33	FLT IN NOT	TOT: CLR: CLR:	29 29 0	0 0 0	17 17 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	48 48 0	0 0 0	0 0 0	29 29 0	0 0 0
12/ 5/76	DDA	322 35	330 37	275 34	FLT IN NOT	TOT: CLR: CLR:	28 10 18	0 0 0	0 0 0	0 0 0	36.8 0.0 57.3	2.1 0.0 3.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	28 10 18	0 0 0
BAH-BEG																		
12/21/76	DDA	301 37	350 44	199 28	FLT IN NOT	TOT: CLR: CLR:	44 33 11	0 0 0	0 0 0	0 0 0	4.9 0.0 19.4	1.0 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
BAH-BKK																		
1/30/77	* DDA	308 19	310 24	249 14	FLT IN NOT	TOT: CLR: CLR:	58 50 8	58 50 8	20 14 6	0 0 0	4.2 0.0 30.1	.8 0.0 5.9	.302E+05 .754E+01 .219E+06	38 32 53	0 0 0	0 0 0	58 50 8	0 0 0
2/ 1/77	DDA	327 19	331 25	261 14	FLT IN NOT	TOT: CLR: CLR:	62 62 0	62 62 0	40 40 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.772E+01 .772E+01 0.	42 42 0	0 0 0	0 0 0	62 62 0	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES									

## BAH-BKK (CONT.)

2/13/77	*	DDA	304 20	310 26	193 14	FLT IN NOT	TOT: CLR: CLR:	66 64 2	66 64 2	41 40 1	0 0 0	0 0 0	1.0 0.0 33.9	.3 0.0 8.5	.140E+04 .436E+02 .449E+05	50 50 16	0 0 0	0 0 0	66 64 2	0 0 0
2/15/77		DDA	348 19	370 26	247 14	FLT IN NOT	TOT: CLR: CLR:	63 63 0	63 63 0	41 41 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.148E+02 .148E+02 0.	47 47 0	0 0 0	0 0 0	63 63 0	0 0 0
11/21/76	*	DDA	326 20	350 26	237 14	FLT IN NOT	TOT: CLR: CLR:	64 59 5	0 0 0	0 0 0	0 0 0	0 0 0	3.3 0.0 42.0	.3 0.0 3.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	64 59 5	0 0 0
11/28/76	*	DDA	307 20	310 26	211 14	FLT IN NOT	TOT: CLR: CLR:	68 61 7	0 0 0	0 0 0	0 0 0	0 0 0	5.5 0.0 53.7	.4 0.0 3.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	68 61 7	0 0 0
11/30/76		DDA	301 19	330 25	240 14	FLT IN NOT	TOT: CLR: CLR:	62 54 8	0 0 0	0 0 0	0 0 0	0 0 0	6.9 0.0 53.4	.5 0.0 3.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	62 54 8	0 0 0
12/30/76		DDA	331 19	370 25	264 14	FLT IN NOT	TOT: CLR: CLR:	56 44 12	0 0 0	0 0 0	0 0 0	0 0 0	17.6 0.0 82.1	.5 0.0 2.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	56 44 12	0 0 0

## BAH-FRA

1/20/77		DDA	337 38	351 49	277 27	FLT IN NOT	TOT: CLR: CLR:	63 54 9	63 54 9	41 35 6	0 0 0	0 0 0	7.0 0.0 49.3	.6 0.0 4.3	.781E+05 .636E+02 .546E+06	162 178 70	0 0 0	0 0 0	21 13 8	42 41 1
1/31/77	*	DDA	289 35	292 45	239 27	FLT IN NOT	TOT: CLR: CLR:	42 34 8	42 34 8	24 19 5	0 0 0	0 0 0	9.7 0.0 51.0	.6 0.0 3.0	.351E+05 .324E+02 .184E+06	52 52 52	0 0 0	0 0 0	42 34 8	0 0 0
1/31/77		DDA	328 38	350 50	233 27	FLT IN NOT	TOT: CLR: CLR:	66 60 6	66 60 6	37 34 3	0 0 0	0 0 0	2.1 0.0 22.6	.4 0.0 4.5	.786E+04 .313E+02 .862E+05	154 164 40	0 0 0	0 0 0	60 54 6	6 6 0
2/14/77		DDA	316 41	350 49	226 30	FLT IN NOT	TOT: CLR: CLR:	43 30 13	43 30 13	14 10 4	0 0 0	0 0 0	7.0 0.0 23.1	1.1 0.0 3.5	.103E+06 .115E+03 .355E+06	245 314 73	0 0 0	0 0 0	33 20 13	10 10 0
2/14/77	*	DDA	347 38	370 49	200 27	FLT IN NOT	TOT: CLR: CLR:	59 53 6	59 53 6	30 27 3	0 0 0	0 0 0	4.4 0.0 42.9	.2 0.0 1.7	.111E+05 .445E+02 .105E+06	119 125 59	0 0 0	0 0 0	42 36 6	17 17 0
11/22/76		DDA	307 38	310 49	214 27	FLT IN NOT	TOT: CLR: CLR:	59 41 18	0 0 0	0 0 0	0 0 0	0 0 0	9.8 0.0 32.1	1.3 0.0 4.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	59 41 18	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O, H2S		%TIC	PATCHES	PD5					
BAH-FRA (CONT.)																				
11/29/76		DDA	325 37	350 49	254 27	FLT IN NOT	TOT: CLR: CLR:	61 53 8	0 0 0	0 0 0	0 0 0	2.3 0.0 17.6	.3 0.0 2.6	0. 0. 0.		0 0 0	0 0 0	0 0 0	61 53 8	0 0 0
11/29/76	*	DDA	327 38	330 49	262 27	FLT IN NOT	TOT: CLR: CLR:	46 43 3	0 0 0	0 0 0	0 0 0	2.1 0.0 32.9	.1 0.0 1.7	0. 0. 0.		0 0 0	0 0 0	0 0 0	46 43 3	0 0 0
12/29/76	*	DDA	314 38	330 49	251 27	FLT IN NOT	TOT: CLR: CLR:	53 46 7	0 0 0	0 0 0	0 0 0	5.5 0.0 41.3	.2 0.0 1.6	0. 0. 0.		0 0 0	0 0 0	0 0 0	53 46 7	0 0 0
BAH-JFK																				
1/25/77	*	AAA	389 40	411 46	283 27	FLT IN NOT	TOT: CLR: CLR:	120 98 22	120 98 22	37 34 3	100 82 18	7 0 7	14.6 0.0 79.8	.4 0.0 2.1	.574E+05 .993E+02 .313E+06	302 324 61	41 31 85	14 14 14	30 8 22	90 90 0
1/26/77		AAA	359 46	429 57	200 27	FLT IN NOT	TOT: CLR: CLR:	157 120 37	157 120 37	0 0 0	128 97 31	11 4 7	13.8 0.0 58.6	.7 0.0 3.0	.959E+05 .140E+04 .402E+06	0 0 0	44 35 71	33 27 50	62 28 34	95 92 3
3/23/77		AAA	386 47	410 58	200 29	FLT IN NOT	TOT: CLR: CLR:	134 130 4	134 130 4	92 90 2	113 110 3	1 0 1	.6 0.0 21.2	.1 0.0 3.0	.191E+03 .165E+03 .102E+04	420 427 101	21 18 100	12 10 69	0 0 0	0 0 0
5/23/77	*	AAA	384 41	410 48	214 27	FLT IN NOT	TOT: CLR: CLR:	76 73 3	76 73 3	49 49 0	0 0 0	0 0 0	.1 0.0 2.6	.0 0.0 1.0	.991E+03 .352E+02 .243E+05	295 295 0	0 0 0	0 0 0	30 27 3	46 46 0
5/25/77		AAA	377 44	410 54	194 28	FLT IN NOT	TOT: CLR: CLR:	81 77 4	81 77 4	50 47 3	0 0 0	0 0 0	2.0 0.0 39.5	.2 0.0 3.3	.195E+05 .461E+02 .394E+06	348 358 193	0 0 0	0 0 0	34 31 3	47 46 1
7/11/77	*	ACA	394 42	411 46	278 28	FLT IN NOT	TOT: CLR: CLR:	100 84 16	100 84 16	67 57 10	0 0 0	0 0 0	6.7 0.0 41.7	0.0 0.0 0.0	.124E+05 .554E+02 .772E+05	200 219 96	0 0 0	0 0 0	9 0 9	0 0 0
7/12/77		ACA	382 46	430 55	203 27	FLT IN NOT	TOT: CLR: CLR:	138 134 4	138 134 4	90 87 3	0 0 0	0 0 0	1.5 0.0 53.4	0.0 0.0 0.0	.231E+04 .140E+03 .750E+05	257 259 207	0 0 0	0 0 0	85 83 2	53 51 2
8/23/77	*	ABA	397 43	411 50	286 28	FLT IN NOT	TOT: CLR: CLR:	119 115 4	119 115 4	81 79 2	0 0 0	0 0 0	.6 0.0 17.6	.2 0.0 6.8	.351E+04 .302E+02 .104E+06	155 156 117	0 0 0	0 0 0	75 72 3	44 43 1
8/24/77		ABA	386 46	430 57	246 27	FLT IN NOT	TOT: CLR: CLR:	145 145 0	145 145 0	95 95 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.341E+02 .341E+02 0.	220 220 0	0 0 0	0 0 0	50 50 0	95 95 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ RH H2O			TROP N	STRAT N		
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
BAH-KUL																				
1/19/77	*	DDA	338 12	350 25	222 3	FLT IN NOT	TOT: CLR: CLR:	79 79 0	79 79 0	49 49 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.142E+02 .142E+02 0.	58 58 0	0 0 0	0 0 0	79 79 0	0 0 0
12/20/76	*	DDA	313 16	350 26	237 4	FLT IN NOT	TOT: CLR: CLR:	77 60 17	0 0 0	0 0 0	0 0 0	0 0 0	10.5 0.0 47.6	.7 0.0 3.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/22/76		DDA	325 15	330 25	253 4	FLT IN NOT	TOT: CLR: CLR:	69 45 24	0 0 0	0 0 0	0 0 0	0 0 0	17.8 0.0 51.2	1.3 0.0 3.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
BAH-SIN																				
1/21/77		DDA	317 14	331 25	287 2	FLT IN NOT	TOT: CLR: CLR:	70 64 6	70 64 6	47 44 3	0 0 0	0 0 0	1.7 0.0 19.5	.3 0.0 3.3	.964E+02 .212E+02 .899E+03	57 59 32	0 0 0	0 0 0	70 64 6	0 0 0
BEG-LHR																				
12/21/76		DDA	280 49	280 52	273 45	FLT IN NOT	TOT: CLR: CLR:	20 14 6	0 0 0	0 0 0	0 0 0	0 0 0	18.6 0.0 62.0	1.6 0.0 5.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
BEG-ORY																				
8/19/76		DDA	324 47	351 48	205 45	FLT IN NOT	TOT: CLR: CLR:	16 11 5	0 0 0	10 7 3	0 0 0	0 0 0	12.1 0.0 38.7	.8 0.0 2.4	0. 0. 0.	150 173 95	0 0 0	0 0 0	16 11 5	0 0 0
8/19/76	*	DDA	328 47	331 48	289 45	FLT IN NOT	TOT: CLR: CLR:	15 15 0	0 0 0	9 9 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	81 81 0	0 0 0	0 0 0	15 15 0	0 0 0
BGR-LAX																				
11/10/78		BBB	343 39	350 44	210 34	FLT IN NOT	TOT: CLR: CLR:	58 44 14	58 44 14	36 29 7	32 24 8	1 0 1	9.7 0.0 40.1	1.3 0.0 5.5	.212E+05 0. .877E+05	37 38 32	49 41 74	53 35 109	58 44 14	0 0 0
12/14/78		BBB	343 42	349 46	290 35	FLT IN NOT	TOT: CLR: CLR:	54 54 0	54 54 0	35 35 0	28 28 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.109E+02 .109E+02 0.	189 189 0	37 37 0	24 24 0	28 28 0	26 26 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N		
						CLD	PD5	OZ	H2O, H2S		%TIC	PATCHES	PD5							
BGR-LPA																				
12/13/78	*	BBB	292 38	310 45	219 29	FLT IN NOT	TOT: CLR: CLR:	70 50 20	70 50 20	41 26 15	33 27 6	7 2 5	16.6 0.0 58.0	1.0 0.0 3.7	.879E+05 .245E+02 .307E+06	41 43 39	56 48 93	125 108 203	70 50 20	0 0 0
BKK-BOM																				
5/24/79	*	BDB	363 17	371 20	290 14	FLT IN NOT	TOT: CLR: CLR:	36 26 10	36 26 10	22 15 7	20 15 5	2 0 2	7.9 0.0 28.4	1.1 0.0 4.0	.117E+06 .113E+04 .419E+06	65 68 58	47 40 67	96 82 138	36 26 10	0 0 0
BKK-DAM																				
8/18/76		DDA	311 27	351 34	209 16	FLT IN NOT	TOT: CLR: CLR:	82 64 18	0 0 0	55 41 14	0 0 0	0 0 0	4.6 0.0 21.2	.5 0.0 2.5	0. 0. 0.	38 42 28	0 0 0	0 0 0	82 64 18	0 0 0
12/ 4/76		DDA	313 28	350 34	236 16	FLT IN NOT	TOT: CLR: CLR:	94 94 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	94 94 0	0 0 0
BKK-DEL																				
1/23/76		BBA	337 22	351 28	212 15	FLT IN NOT	TOT: CLR: CLR:	22 18 4	0 0 0	22 18 4	0 0 0	0 0 0	7.6 0.0 41.7	.6 0.0 3.5	0. 0. 0.	36 36 35	0 0 0	0 0 0	22 18 4	0 0 0
3/19/76		BBA	336 22	351 28	209 15	FLT IN NOT	TOT: CLR: CLR:	24 20 4	0 0 0	24 20 4	0 0 0	0 0 0	4.3 0.0 26.0	.5 0.0 2.8	0. 0. 0.	58 59 50	0 0 0	0 0 0	24 20 4	0 0 0
3/24/76	*	BBA	360 21	371 28	219 15	FLT IN NOT	TOT: CLR: CLR:	21 20 1	0 0 0	21 20 1	0 0 0	0 0 0	.3 0.0 5.9	.6 0.0 12.0	0. 0. 0.	73 72 97	0 0 0	0 0 0	21 20 1	0 0 0
4/20/76	*	BBA	376 21	411 28	209 14	FLT IN NOT	TOT: CLR: CLR:	23 23 0	0 0 0	23 23 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	98 98 0	0 0 0	0 0 0	23 23 0	0 0 0
8/20/76	*	DDA	321 22	331 28	251 15	FLT IN NOT	TOT: CLR: CLR:	35 17 18	0 0 0	23 7 16	0 0 0	0 0 0	14.4 0.0 27.9	1.7 0.0 3.3	0. 0. 0.	34 31 35	0 0 0	0 0 0	35 17 18	0 0 0
9/ 6/76		BBA	342 22	353 28	246 15	FLT IN NOT	TOT: CLR: CLR:	33 33 0	0 0 0	19 19 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	40 40 0	0 0 0	0 0 0	33 33 0	0 0 0
10/12/77	*	BCB	362 21	371 28	217 14	FLT IN NOT	TOT: CLR: CLR:	31 27 4	31 27 4	0 0 0	0 0 0	0 0 0	1.5 0.0 11.8	0.0 0.0 0.0	.326E+04 .209E+02 .251E+05	0 0 0	0 0 0	0 0 0	31 27 4	0 0 0

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES									
BKK-DEL (CONT.)																						
12/ 8/78 *	BBB	358 21	370 28	258 15	FLT IN NOT	TOT: CLR: CLR:	32 27 5	32 27 5	13 10 3	13 10 3	3 0 3	4.5 0.0 29.1	.5 0.0 3.4	.145E+05 .314E+02 .927E+05	61 60 64	58 46 100	55 41 102	32 27 5			0 0 0	
BKK-DRW																						
8/18/76 *	DDA	333 -1	350 12	249 -11	FLT IN NOT	TOT: CLR: CLR:	56 43 13	0 0 0	36 28 8	0 0 0	0 0 0	11.9 0.0 51.4	.7 0.0 2.9	0. 0. 0.	21 21 18	0 0 0	0 0 0	56 43 13			0 0 0	
8/20/76	DDA	334 -3	370 10	205 -12	FLT IN NOT	TOT: CLR: CLR:	53 39 14	0 0 0	35 25 10	0 0 0	0 0 0	7.7 0.0 29.0	.8 0.0 3.2	0. 0. 0.	20 19 21	0 0 0	0 0 0	53 39 14			0 0 0	
BKK-HKG																						
1/23/76 *	BBA	376 13	390 22	218 8	FLT IN NOT	TOT: CLR: CLR:	24 24 0	0 0 0	24 24 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	10 10 0	0 0 0	0 0 0	24 24 0			0 0 0	
3/19/76 *	BBA	336 13	352 21	204 8	FLT IN NOT	TOT: CLR: CLR:	22 20 2	0 0 0	22 20 2	0 0 0	0 0 0	.6 0.0 7.1	.2 0.0 2.0	0. 0. 0.	40 40 33	0 0 0	0 0 0	22 20 2			0 0 0	
3/24/76	BBA	327 13	331 21	251 8	FLT IN NOT	TOT: CLR: CLR:	19 17 2	0 0 0	19 17 2	0 0 0	0 0 0	.3 0.0 2.5	.5 0.0 5.0	0. 0. 0.	49 50 48	0 0 0	0 0 0	19 17 2			0 0 0	
4/20/76	BBA	334 10	371 13	210 8	FLT IN NOT	TOT: CLR: CLR:	6 6 0	0 0 0	6 6 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	41 41 0	0 0 0	0 0 0	6 6 0			0 0 0	
5/25/79	BDB	359 17	371 21	280 15	FLT IN NOT	TOT: CLR: CLR:	20 19 1	20 19 1	12 12 0	9 9 0	2 2 0	.1 0.0 1.6	.1 0.0 2.0	.532E+04 .276E+04 .541E+05	70 70 0	45 45 0	151 151 0	20 19 1			0 0 0	
9/ 6/76 *	BBA	382 12	390 21	271 8	FLT IN NOT	TOT: CLR: CLR:	33 33 0	0 0 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	33 33 0	0 0 0	0 0 0	33 33 0			0 0 0	
10/ 8/77 *	BCB	310 12	310 20	310 8	FLT IN NOT	TOT: CLR: CLR:	27 22 5	27 22 5	0 0 0	0 0 0	0 0 0	5.4 0.0 29.2	0.0 0.0 0.0	.110E+05 .555E+01 .595E+05	0 0 0	0 0 0	0 0 0	27 22 5			0 0 0	
10/12/77	BCB	361 13	371 21	193 8	FLT IN NOT	TOT: CLR: CLR:	32 14 18	32 14 18	0 0 0	0 0 0	0 0 0	21.5 0.0 38.1	0.0 0.0 0.0	.882E+05 .229E+02 .157E+06	0 0 0	0 0 0	0 0 0	32 14 18			0 0 0	



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			TROP			STRAT	
						CLD	PD5	OZ	H20	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
BKK-HKG (CONT.)																			
11/ 3/78	BBB	347 17	370 22	198 14	FLT IN NOT	TOT: CLR: CLR:	21 14 7	21 14 7	13 8 5	11 5 6	3 0 3	17.1 0.0 51.3	1.0 0.0 2.9	.531E+05 .931E+01 .159E+06	37 37 37	64 55 72	240 220 257	21 14 7	0 0 0
12/ 8/78	BBB	322 17	330 21	259 15	FLT IN NOT	TOT: CLR: CLR:	18 18 0	18 18 0	12 8 0	8 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.209E+02 .209E+02 0.	58 58 0	31 31 0	124 124 0	18 18 0	0 0 0
BKK-KHI																			
10/ 8/77	BCB	324 20	351 25	282 14	FLT IN NOT	TOT: CLR: CLR:	40 35 5	40 35 5	0 0 0	0 0 0	0 0 0	2.7 0.0 21.6	0.0 0.0 0.0	.223E+05 .181E+03 .177E+06	0 0 0	0 0 0	0 0 0	40 35 5	0 0 0
BKK-MEL																			
8/ 9/76 *	DDA	322 -12	352 12	191 -37	FLT IN NOT	TOT: CLR: CLR:	81 81 0	0 0 0	54 54 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	27 27 0	0 0 0	0 0 0	81 81 0	0 0 0
8/11/76	DDA	315 -15	330 10	235 -37	FLT IN NOT	TOT: CLR: CLR:	90 83 7	0 0 0	58 54 4	0 0 0	0 0 0	1.0 0.0 12.5	.2 0.0 2.9	0. 0. 0.	29 28 35	0 0 0	0 0 0	90 83 7	0 0 0
8/14/76 *	DDA	318 -15	351 12	244 -37	FLT IN NOT	TOT: CLR: CLR:	91 67 24	0 0 0	59 42 17	0 0 0	0 0 0	11.8 0.0 44.6	1.0 0.0 3.8	0. 0. 0.	28 26 33	0 0 0	0 0 0	91 67 24	0 0 0
8/16/76	DDA	337 -15	370 11	239 -37	FLT IN NOT	TOT: CLR: CLR:	83 64 19	0 0 0	42 32 10	0 0 0	0 0 0	9.0 0.0 39.1	.8 0.0 3.6	0. 0. 0.	42 49 20	0 0 0	0 0 0	77 58 19	6 6 0
8/24/76	DDA	324 -15	370 11	238 -38	FLT IN NOT	TOT: CLR: CLR:	87 70 17	0 0 0	58 48 10	0 0 0	0 0 0	7.4 0.0 37.9	.7 0.0 3.5	0. 0. 0.	120 140 21	0 0 0	0 0 0	68 51 17	19 19 0
8/31/76	DDA	343 -15	371 11	215 -37	FLT IN NOT	TOT: CLR: CLR:	89 79 10	0 0 0	56 49 7	0 0 0	0 0 0	2.3 0.0 20.7	.4 0.0 3.2	0. 0. 0.	80 85 44	0 0 0	0 0 0	78 68 10	11 11 0
BKK-SIN																			
1/30/77 *	DDA	341 8	350 12	267 3	FLT IN NOT	TOT: CLR: CLR:	15 11 4	15 11 4	3 3 0	0 0 0	0 0 0	11.9 0.0 44.5	.9 0.0 3.3	.369E+05 .520E+02 .138E+06	47 47 0	0 0 0	0 0 0	15 11 4	0 0 0
2/13/77 *	DDA	337 8	350 13	262 3	FLT IN NOT	TOT: CLR: CLR:	14 13 1	14 13 1	7 6 1	0 0 0	0 0 0	.2 0.0 2.4	.1 0.0 1.0	.139E+02 .125E+02 .326E+02	20 22 13	0 0 0	0 0 0	14 13 1	0 0 0

## APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			QZ	RH	H2O	TROP N	STRAT N	
						CLD	PD5	OZ	H2O, H2S	HTIC	PATCHES	PD5							
BKK-THR																			
2/21/77		DDA	328 26	349 35	252 15	FLT IN NOT	TOT: CLR: CLR:	73 45 28	73 45 28	39 21 18	0 0 0	0 0 0	14.3 0.0 37.4	2.0 0.0 5.3	.101E+06 .117E+03 .262E+06	51 64 59	0 0 0	0 0 0	0 0 0
2/23/77	*	DDA	339 25	370 34	260 15	FLT IN NOT	TOT: CLR: CLR:	56 37 19	56 37 19	33 22 11	0 0 0	0 0 0	20.7 0.0 61.1	1.0 0.0 3.1	.643E+05 .623E+03 .188E+06	48 45 53	0 0 0	0 0 0	0 0 0
8/ 9/76		DDA	313 26	351 33	236 16	FLT IN NOT	TOT: CLR: CLR:	62 49 13	0 0 0	39 32 7	0 0 0	0 0 0	4.9 0.0 23.3	.7 0.0 3.2	0. 0. 0.	37 39 25	0 0 0	0 0 0	62 49 13
8/11/76	*	DDA	322 25	330 34	243 15	FLT IN NOT	TOT: CLR: CLR:	63 37 26	0 0 0	41 23 18	0 0 0	0 0 0	18.1 0.0 43.7	1.6 0.0 3.8	0. 0. 0.	39 45 30	0 0 0	0 0 0	63 37 26
8/14/76		DDA	311 26	350 35	245 15	FLT IN NOT	TOT: CLR: CLR:	66 66 0	0 0 0	40 40 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	22 22 0	0 0 0	0 0 0	66 66 0
8/16/76	*	DDA	311 26	330 34	238 14	FLT IN NOT	TOT: CLR: CLR:	67 49 18	0 0 0	43 30 13	0 0 0	0 0 0	12.8 0.0 47.8	.6 0.0 2.2	0. 0. 0.	43 48 32	0 0 0	0 0 0	67 49 18
11/ 2/78	*	BBB	350 25	370 34	252 14	FLT IN NOT	TOT: CLR: CLR:	64 64 0	64 64 0	41 41 0	26 26 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.111E+02 .111E+02 0.	66 66 0	22 22 0	37 37 0	64 64 0
12/ 6/76	*	DDA	327 25	331 34	258 14	FLT IN NOT	TOT: CLR: CLR:	59 57 2	0 0 0	0 0 0	0 0 0	0 0 0	1.1 0.0 33.3	.2 0.0 5.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	59 57 2
BOM-FRA																			
5/24/79	*	BCB	330 36	370 49	213 20	FLT IN NOT	TOT: CLR: CLR:	80 58 22	80 58 22	52 37 15	40 31 9	1 0 1	9.5 0.0 34.5	1.3 0.0 4.8	.356E+06 .112E+04 .129E+07	98 92 114	40 36 55	70 52 131	30 58 22
BOM-IST																			
1/ 6/79	*	BBB	353 30	376 40	241 20	FLT IN NOT	TOT: CLR: CLR:	51 30 21	0 0 0	33 18 15	28 17 11	1 0 1	14.4 0.0 35.1	1.4 0.0 3.5	0. 0. 0.	59 37 26	52 41 68	32 27 38	51 30 21
2/24/79	*	BBB	340 34	371 40	206 20	FLT IN NOT	TOT: CLR: CLR:	15 15 0	0 0 0	10 10 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	160 150 0	15 15 0	18 18 0	11 11 0

DEP-ARR	IM/10/1Y	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
BOM-LHR																		
1/ 7/77	DDA	325 37	350 52	206 19	FLT IN NOT	TOT: CLR: CLR:	101 91 10	0 0 0	0 0 0	0 0 0	2.6 0.0 26.0	.3 0.0 3.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	78 71 7	23 20 3
1/ 8/77 *	DDA	310 37	370 51	249 20	FLT IN NOT	TOT: CLR: CLR:	86 66 20	0 0 0	0 0 0	0 0 0	12.5 0.0 53.9	1.1 0.0 4.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	81 61 20	5 5 0
1/23/77	DDA	331 35	350 51	253 19	FLT IN NOT	TOT: CLR: CLR:	107 76 31	107 76 31	71 49 22	0 0 0	13.3 0.0 45.9	.6 0.0 1.9	.318E+05 .178E+03 .109E+06	82 88 66	0 0 0	0 0 0	96 65 31	11 11 0
1/24/77 *	DDA	340 32	371 39	330 21	FLT IN NOT	TOT: CLR: CLR:	50 44 6	50 44 6	33 29 4	0 0 0	6.2 0.0 51.8	.4 0.0 3.5	.107E+05 .451E+03 .860E+05	76 77 70	0 0 0	0 0 0	42 36 6	8 8 0
8/ 3/76	DDA	319 38	350 52	233 19	FLT IN NOT	TOT: CLR: CLR:	78 74 4	0 0 0	47 45 2	0 0 0	2.1 0.0 41.7	.3 0.0 6.3	0. 0. 0.	98 100 67	0 0 0	0 0 0	68 65 3	10 9 1
8/ 4/76 *	DDA	319 36	330 51	276 21	FLT IN NOT	TOT: CLR: CLR:	84 67 17	0 0 0	53 41 12	0 0 0	10.2 0.0 50.3	.5 0.0 2.5	0. 0. 0.	79 85 59	0 0 0	0 0 0	84 67 17	0 0 0
8/ 6/76	DDA	322 37	351 51	279 23	FLT IN NOT	TOT: CLR: CLR:	70 66 4	0 0 0	45 43 2	0 0 0	.8 0.0 13.1	.2 0.0 2.8	0. 0. 0.	86 87 79	0 0 0	0 0 0	59 59 0	11 7 4
8/ 7/76 *	DDA	320 37	330 51	199 20	FLT IN NOT	TOT: CLR: CLR:	88 86 2	0 0 0	58 56 2	0 0 0	.0 0.0 1.8	.0 0.0 1.0	0. 0. 0.	84 84 78	0 0 0	0 0 0	88 86 2	0 0 0
11/22/76 *	DDA	315 37	330 51	261 20	FLT IN NOT	TOT: CLR: CLR:	87 63 24	0 0 0	0 0 0	0 0 0	16.4 0.0 59.5	1.2 0.0 4.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	87 63 24	0 0 0
12/ 9/76	DDA	321 36	350 52	250 19	FLT IN NOT	TOT: CLR: CLR:	110 101 9	0 0 0	0 0 0	0 0 0	3.8 0.0 47.0	.4 0.0 4.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	96 87 9	14 14 0
12/10/76 *	DDA	313 37	330 51	234 20	FLT IN NOT	TOT: CLR: CLR:	85 59 26	0 0 0	0 0 0	0 0 0	16.0 0.0 52.2	2.0 0.0 6.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	85 59 26	0 0 0
12/28/76	DDA	311 37	350 52	211 19	FLT IN NOT	TOT: CLR: CLR:	113 80 33	0 0 0	0 0 0	0 0 0	17.1 0.0 58.4	.9 0.0 3.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	101 68 33	12 12 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXH1 EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TRCP	STRAT
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
BOM-PER																		
1/ 7/77 *	DDA	324 -7	350 17	240 -31	FLT TOT: IN CLR: NOT CLR:	87 74 13	0 0 0	0 0 0	0 0 0	2.8 0.0 18.8	.4 0.0 2.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	87 74 13	0 0 0	
1/ 8/77	DDA	327 -7	340 16	227 -31	FLT TOT: IN CLR: NOT CLR:	85 77 8	0 0 0	0 0 0	0 0 0	1.7 0.0 17.6	.3 0.0 3.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	85 77 8	0 0 0	
1/23/77 *	DDA	350 11	351 18	345 3	FLT TOT: IN CLR: NOT CLR:	22 13 9	22 13 9	14 8 6	0 0 0	27.9 0.0 68.1	1.5 0.0 3.6	.201E+06 .123E+02 .492E+06	47 54 39	0 0 0	0 0 0	22 13 9	0 0 0	
1/24/77	DDA	324 -8	340 17	194 -31	FLT TOT: IN CLR: NOT CLR:	75 60 15	75 60 15	45 39 6	0 0 0	6.3 0.0 31.7	.9 0.0 4.5	.422E+05 .230E+02 .211E+06	50 53 33	0 0 0	0 0 0	75 60 15	0 0 0	
8/ 3/76 *	DDA	329 -6	351 16	244 -31	FLT TOT: IN CLR: NOT CLR:	78 50 28	0 0 0	52 32 20	0 0 0	7.5 0.0 20.9	1.0 0.0 2.7	0. 0. 0.	50 55 42	0 0 0	0 0 0	78 50 28	0 0 0	
8/ 4/76	DDA	327 -7	341 16	249 -31	FLT TOT: IN CLR: NOT CLR:	87 87 0	0 0 0	54 54 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	31 31 0	0 0 0	0 0 0	97 87 0	0 0 0	
8/ 6/76 *	DDA	307 -5	350 17	199 -30	FLT TOT: IN CLR: NOT CLR:	82 71 11	0 0 0	55 48 7	0 0 0	2.7 0.0 20.2	.2 0.0 1.5	0. 0. 0.	44 45 37	0 0 0	0 0 0	82 71 11	0 0 0	
8/ 7/76	DDA	308 -6	341 16	205 -31	FLT TOT: IN CLR: NOT CLR:	76 56 20	0 0 0	47 34 13	0 0 0	7.3 0.0 27.7	.8 0.0 3.2	0. 0. 0.	36 36 36	0 0 0	0 0 0	76 56 20	0 0 0	
11/23/76	DDA	326 -7	360 17	253 -31	FLT TOT: IN CLR: NOT CLR:	88 57 31	0 0 0	0 0 0	0 0 0	12.7 0.0 36.0	1.4 0.0 4.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	68 57 31	0 0 0	
12/ 9/76 *	DDA	324 -7	350 17	192 -31	FLT TOT: IN CLR: NOT CLR:	90 75 15	0 0 0	0 0 0	0 0 0	4.5 0.0 27.1	.7 0.0 3.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	90 75 15	0 0 0	
12/10/76	DDA	328 -7	341 17	251 -31	FLT TOT: IN CLR: NOT CLR:	88 79 9	0 0 0	0 0 0	0 0 0	1.0 0.0 9.5	.2 0.0 1.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	63 79 9	0 0 0	
12/28/76 *	DDA	334 -7	350 16	251 -31	FLT TOT: IN CLR: NOT CLR:	87 65 22	0 0 0	0 0 0	0 0 0	14.3 0.0 56.4	1.1 0.0 4.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	87 65 22	0 0 0	

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			0Z			RH	H2O	TROP N	STRAT N
					CLD	PD5	0Z	H2O	H2S		%TIC	PATCHES	PD5							
BOM-THR																				
1/ 7/79	BBB	343 28	361 35	272 22	FLT	TOT:	39	0	25	19	7	17.6	.9	0.		79	76	57	39	0
					IN	CLR:	24	0	15	12	1	0.0	0.0	0.		82	65	50	24	0
					NOT	CLR:	15	0	10	7	6	45.8	2.5	0.		76	95	70	15	0
2/25/79	BBB	325 25	351 35	202 19	FLT	TOT:	43	0	27	20	0	0.0	0.0	0.		52	13	70	43	0
					IN	CLR:	43	0	27	20	0	0.0	0.0	0.		52	13	70	43	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.		0	0	0	0	0
11/25/78	BBB	382 25	391 34	243 19	FLT	TOT:	41	41	26	21	2	.0	.0	.131E+02	66	45	26	41	0	
					IN	CLR:	40	40	25	21	2	0.0	0.0	.134E+02	66	45	26	40	0	
					NOT	CLR:	1	1	1	0	0	1.6	1.0	0.	64	0	0	1	0	
11/25/78 *	BBB	359 27	370 35	191 20	FLT	TOT:	32	32	21	18	1	.6	.3	.980E+03	65	38	30	32	0	
					IN	CLR:	30	30	19	17	1	0.0	0.0	.844E+01	69	38	26	30	0	
					NOT	CLR:	2	2	2	1	0	9.4	4.0	.156E+05	26	39	56	2	0	
12/17/78	BBB	344 28	350 35	219 21	FLT	TOT:	42	42	25	18	0	0.0	0.0	.459E+02	72	33	25	0	0	
					IN	CLR:	42	42	25	18	0	0.0	0.0	.459E+02	72	33	25	0	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
12/17/78 *	BBB	369 27	370 34	349 21	FLT	TOT:	27	27	15	12	0	0.0	0.0	.967E+01	69	32	23	0	0	
					IN	CLR:	27	27	15	12	0	0.0	0.0	.967E+01	69	32	23	0	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
12/23/78	BBB	347 28	350 35	280 21	FLT	TOT:	37	37	0	17	0	0.0	0.0	.273E+02	0	18	31	0	0	
					IN	CLR:	37	37	0	17	0	0.0	0.0	.273E+02	0	18	31	0	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
12/23/78 *	BBB	360 28	370 35	231 20	FLT	TOT:	31	31	0	14	0	0.0	0.0	.406E+02	0	23	34	0	0	
					IN	CLR:	31	31	0	14	0	0.0	0.0	.406E+02	0	23	34	0	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
BOS-DTW																				
9/15/76 *	BBA	344 42	370 43	196 42	FLT	TOT:	10	0	6	0	0	0.0	0.0	0.		52	0	0	10	0
					IN	CLR:	10	0	6	0	0	0.0	0.0	0.		52	0	0	10	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.		0	0	0	0	0
9/15/76	BBA	320 43	351 43	231 43	FLT	TOT:	11	0	8	0	0	0.0	0.0	0.		57	0	0	11	0
					IN	CLR:	11	0	8	0	0	0.0	0.0	0.		57	0	0	11	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.		0	0	0	0	0
9/16/76 *	BBA	350 42	369 43	269 42	FLT	TOT:	10	0	6	0	0	0.0	0.0	0.		70	0	0	10	0
					IN	CLR:	10	0	6	0	0	0.0	0.0	0.		70	0	0	10	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.		0	0	0	0	0
9/16/76	BBA	371 43	390 43	291 43	FLT	TOT:	10	0	6	0	0	0.0	0.0	0.		73	0	0	10	0
					IN	CLR:	10	0	6	0	0	0.0	0.0	0.		73	0	0	10	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.		0	0	0	0	0



DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TRCP N	STRAT N
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O		
BOS-LHR (CONT.)																			
9/27/77	* ABA	396 51	430 54	275 43	FLT IN NOT	TOT: CLR: CLR:	75 71 4	0 0 0	45 43 2	0 0 0	0 0 0	2.4 0.0 45.0	.3 0.0 6.3	0. 0. 0.	144 147 81	0 0 0	0 0 0	35 35 0	40 36 4
9/27/77	ABA	404 50	411 52	209 43	FLT IN NOT	TOT: CLR: CLR:	56 43 15	0 0 0	36 29 7	0 0 0	0 0 0	7.7 0.0 29.7	.5 0.0 2.1	0. 0. 0.	184 209 80	0 0 0	0 0 0	34 19 15	24 24 0
9/28/77	ABA	403 50	410 53	234 43	FLT IN NOT	TOT: CLR: CLR:	49 48 1	0 0 0	31 31 0	0 0 0	0 0 0	.2 0.0 10.2	.1 0.0 3.0	0. 0. 0.	167 167 0	0 0 0	0 0 0	9 8 1	40 40 0
BOS-SFO																			
12/29/75	* CAA	383 43	410 44	214 38	FLT IN NOT	TOT: CLR: CLR:	30 23 7	0 0 0	30 23 7	0 0 0	0 0 0	9.4 0.0 40.2	.7 0.0 2.9	0. 0. 0.	153 190 31	0 0 0	0 0 0	13 6 7	17 17 0
12/30/75	CAA	369 41	390 43	218 38	FLT IN NOT	TOT: CLR: CLR:	42 41 1	0 0 0	42 41 1	0 0 0	0 0 0	2.1 0.0 89.4	.0 0.0 1.0	0. 0. 0.	145 147 35	0 0 0	0 0 0	12 11 1	11 11 0
CCS-GIG																			
4/ 8/76	BBA	360 -6	371 9	207 -22	FLT IN NOT	TOT: CLR: CLR:	36 32 4	0 0 0	36 32 4	0 0 0	0 0 0	2.0 0.0 18.2	.3 0.0 3.0	0. 0. 0.	35 35 39	0 0 0	0 0 0	11 11 0	0 0 0
4/24/76	BBA	358 -4	370 9	208 -22	FLT IN NOT	TOT: CLR: CLR:	32 13 19	0 0 0	32 13 19	0 0 0	0 0 0	39.5 0.0 66.6	1.8 0.0 3.1	0. 0. 0.	33 34 32	0 0 0	0 0 0	13 3 10	0 0 0
4/24/76	* BBA	346 -1	352 9	303 -15	FLT IN NOT	TOT: CLR: CLR:	27 12 15	0 0 0	27 12 15	0 0 0	0 0 0	18.9 0.0 34.1	1.9 0.0 3.5	0. 0. 0.	33 30 36	0 0 0	0 0 0	12 6 6	0 0 0
4/25/76	BBA	348 -2	371 9	205 -15	FLT IN NOT	TOT: CLR: CLR:	28 25 3	0 0 0	28 25 3	0 0 0	0 0 0	.6 0.0 5.8	.2 0.0 2.0	0. 0. 0.	41 39 57	0 0 0	0 0 0	11 10 1	0 0 0
4/26/76	* BBA	386 -3	391 9	351 -16	FLT IN NOT	TOT: CLR: CLR:	30 6 24	0 0 0	30 6 24	0 0 0	0 0 0	30.8 0.0 38.5	1.5 0.0 1.9	0. 0. 0.	37 26 39	0 0 0	0 0 0	13 3 10	0 0 0
9/ 2/76	BBA	363 -6	369 9	221 -22	FLT IN NOT	TOT: CLR: CLR:	56 56 0	0 0 0	36 36 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	52 52 0	0 0 0	0 0 0	56 56 0	0 0 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						STROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
CCS-GUA																				
4/	8/76	* BBA	354 12	374 14	210 11	FLT IN NOT	TOT: CLR: CLR:	16 15 1	0 0 0	16 15 1	0 0 0	0 0 0	.5 0.0 7.5	.6 0.0 9.0	0. 0. 0.	48 45 93	0 0 0	0 0 0	16 15 1	0 0 0
4/24/76		* BBA	361 12	371 14	213 10	FLT IN NOT	TOT: CLR: CLR:	20 8 12	0 0 0	20 8 12	0 0 0	0 0 0	27.3 0.0 45.5	2.2 0.0 3.7	0. 0. 0.	62 60 63	0 0 0	0 0 0	20 8 12	0 0 0
4/26/76		BBA	345 13	351 14	277 12	FLT IN NOT	TOT: CLR: CLR:	12 2 10	0 0 0	12 2 10	0 0 0	0 0 0	28.5 0.0 34.2	2.8 0.0 3.4	0. 0. 0.	54 56 53	0 0 0	0 0 0	12 2 10	0 0 0
5/	2/76	* BBA	350 12	371 15	190 10	FLT IN NOT	TOT: CLR: CLR:	31 13 18	0 0 0	20 9 11	0 0 0	0 0 0	28.3 0.0 48.8	1.5 0.0 2.6	0. 0. 0.	46 47 44	0 0 0	0 0 0	31 13 18	0 0 0
9/	1/76	* BBA	353 12	370 14	254 11	FLT IN NOT	TOT: CLR: CLR:	26 26 0	0 0 0	17 17 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	51 51 0	0 0 0	0 0 0	26 26 0	0 0 0
CCS-MIA																				
4/25/76		* BBA	322 14	331 18	265 11	FLT IN NOT	TOT: CLR: CLR:	8 3 5	0 0 0	8 3 5	0 0 0	0 0 0	29.5 0.0 47.2	.5 0.0 .8	0. 0. 0.	46 48 45	0 0 0	0 0 0	8 3 5	0 0 0
CHC-SYD																				
1/	2/77	DDA	367 -39	390 -35	286 -43	FLT IN NOT	TOT: CLR: CLR:	25 19 6	0 0 0	0 0 0	0 0 0	0 0 0	14.5 0.0 60.3	1.2 0.0 4.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	25 19 6	0 0 0
1/	2/77	* DDA	301 -39	330 -35	257 -42	FLT IN NOT	TOT: CLR: CLR:	19 10 9	0 0 0	0 0 0	0 0 0	0 0 0	25.3 0.0 53.3	2.5 0.0 5.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	19 10 9	0 0 0
8/26/76		DDA	347 -39	350 -35	277 -43	FLT IN NOT	TOT: CLR: CLR:	27 27 0	0 0 0	17 17 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	194 194 0	0 0 0	0 0 0	24 24 0	3 3 0
8/26/76		* DDA	321 -39	331 -35	199 -43	FLT IN NOT	TOT: CLR: CLR:	22 19 3	0 0 0	14 13 1	0 0 0	0 0 0	1.1 0.0 8.1	.6 0.0 4.7	0. 0. 0.	176 185 61	0 0 0	0 0 0	22 19 3	0 0 0
12/19/76		DDA	345 -39	350 -35	281 -43	FLT IN NOT	TOT: CLR: CLR:	25 21 4	0 0 0	0 0 0	0 0 0	0 0 0	3.2 0.0 20.1	.9 0.0 5.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT		
						CLD	PD5	OZ	H2O	H2S	ATIC	PATCHES	PD5	OZ	RH	H2O	N	N	
CHC-SYD (CONT.)																			
12/19/76	*	DDA	333 -39	350 -35	258 -43	FLT IN NOT	TOT: CLR: CLR:	22 19 3	0 0 0	0 0 0	0 0 0	2.0 0.0 14.9	.5 0.0 3.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
CLE-ORD																			
5/ 9/76		CAA	284 41	310 41	217 41	FLT IN NOT	TOT: CLR: CLR:	5 5 0	0 0 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	90 90 0	0 0 0	0 0 0	5 5 0	0 0 0
5/15/76		CAA	256 41	310 42	192 41	FLT IN NOT	TOT: CLR: CLR:	5 1 4	0 0 0	2 1 1	0 0 0	60.7 0.0 75.9	2.0 0.0 2.5	0. 0. 0.	41 34 47	0 0 0	0 0 0	5 1 4	0 0 0
CPH-JFK																			
7/ 7/77	*	ACA	400 53	411 58	303 41	FLT IN NOT	TOT: CLR: CLR:	74 73 1	0 0 0	0 0 0	0 0 0	.0 0.0 .4	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	10 9 1	64 64 0
7/ 7/77		ACA	407 55	430 60	200 41	FLT IN NOT	TOT: CLR: CLR:	75 72 3	0 0 0	0 0 0	0 0 0	.1 0.0 3.1	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	9 6 3	66 66 0
7/11/77	*	ACA	368 57	370 63	288 41	FLT IN NOT	TOT: CLR: CLR:	72 72 0	72 72 0	46 46 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.206E+03 .206E+03 0.	296 296 0	0 0 0	0 0 0	29 29 0	43 43 0
7/11/77		ACA	391 54	430 58	293 42	FLT IN NOT	TOT: CLR: CLR:	79 75 4	79 75 4	52 50 2	0 0 0	.1 0.0 2.4	0.0 0.0 0.0	.287E+03 .372E+02 .497E+04	323 333 80	0 0 0	0 0 0	25 21 4	54 54 0
7/16/77		ACA	380 57	391 63	304 42	FLT IN NOT	TOT: CLR: CLR:	80 78 2	80 78 2	54 53 1	0 0 0	1.2 0.0 46.7	0.0 0.0 0.0	.154E+04 .793E+02 .585E+05	394 397 223	0 0 0	0 0 0	23 21 2	57 57 0
7/16/77	*	ACA	394 49	410 54	296 41	FLT IN NOT	TOT: CLR: CLR:	40 37 3	40 37 3	25 24 1	0 0 0	.4 0.0 5.6	0.0 0.0 0.0	.201E+04 .154E+03 .248E+05	210 215 89	0 0 0	0 0 0	22 19 3	18 18 0
8/22/77	*	ABA	396 51	411 56	313 41	FLT IN NOT	TOT: CLR: CLR:	64 61 3	64 61 3	42 41 1	0 0 0	1.1 0.0 23.0	.1 0.0 2.0	.335E+04 .214E+02 .710E+05	267 271 107	0 0 0	0 0 0	6 3 3	58 58 0
8/22/77		ABA	398 56	411 62	200 41	FLT IN NOT	TOT: CLR: CLR:	76 76 0	76 76 0	50 50 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.315E+02 .315E+02 0.	334 334 0	0 0 0	0 0 0	5 5 0	71 71 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		OZ		RH H2O		TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ						
CPH-JFK (CONT.)																				
9/ 3/77		ABA	375 57	411 64	244 41	FLT IN NOT	TOT: CLR: CLR:	83 75 8	83 75 8	53 47 6	0 0 0	0 0 0	2.3 0.0 23.8	.5 0.0 5.1	.942E+04 .559E+02 .972E+05	312 337 118	0 0 0	0 0 0	9 9 0	74 66 8
9/ 3/77 *		ABA	395 52	410 56	235 41	FLT IN NOT	TOT: CLR: CLR:	71 62 9	71 62 9	46 42 4	0 0 0	0 0 0	4.1 0.0 32.2	.4 0.0 3.2	.239E+05 .235E+02 .188E+06	237 253 70	0 0 0	0 0 0	21 12 9	50 50 0
9/ 4/77 *		ABA	394 52	410 56	187 41	FLT IN NOT	TOT: CLR: CLR:	72 72 0	72 72 0	45 45 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.202E+02 .202E+02 0.	258 258 0	0 0 0	0 0 0	13 13 0	59 59 0
9/ 4/77		ABA	401 56	430 62	200 41	FLT IN NOT	TOT: CLR: CLR:	78 77 1	78 77 1	49 49 0	0 0 0	0 0 0	.2 0.0 16.9	.0 0.0 2.0	.848E+02 .828E+02 .239E+03	359 359 0	0 0 0	0 0 0	6 6 0	72 71 1
9/ 9/77		ABA	402 56	430 62	207 41	FLT IN NOT	TOT: CLR: CLR:	83 83 0	83 83 0	56 56 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.184E+02 .184E+02 0.	290 290 0	0 0 0	0 0 0	11 11 0	72 72 0
9/ 9/77 *		ABA	375 53	410 56	216 42	FLT IN NOT	TOT: CLR: CLR:	67 58 9	67 58 9	46 40 6	0 0 0	0 0 0	6.7 0.0 49.7	.7 0.0 5.0	.370E+05 .838E+02 .275E+06	214 236 63	0 0 0	0 0 0	25 16 9	42 42 0
CPT-LHR																				
10/29/77 *		ABB	363 8	430 50	283 -32	FLT IN NOT	TOT: CLR: CLR:	42 35 7	0 0 0	0 0 0	0 0 0	0 0 0	5.8 0.0 35.0	.7 0.0 4.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	38 31 7	4 4 0
CTS-JFK																				
2/18/78 *		ABB	370 53	391 64	230 42	FLT IN NOT	TOT: CLR: CLR:	63 62 1	63 62 1	41 40 1	36 35 1	0 0 0	.7 0.0 47.1	.0 0.0 3.0	.105E+02 .198E+01 .540E+03	613 628 47	42 40 89	46 46 67	1 0 1	62 62 0
CUN-JFK																				
3/ 2/79 *		BBB	349 31	351 39	292 22	FLT IN NOT	TOT: CLR: CLR:	30 26 4	0 0 0	17 15 2	11 8 3	0 0 0	3.0 0.0 22.3	.6 0.0 4.8	0. 0. 0.	73 77 41	37 30 56	27 19 47	24 20 4	6 6 0
3/ 2/79		BBB	324 31	370 39	212 23	FLT IN NOT	TOT: CLR: CLR:	25 10 15	0 0 0	16 7 9	12 5 7	4 0 4	17.6 0.0 29.4	1.0 0.0 1.7	0. 0. 0.	57 68 49	72 38 96	82 43 110	23 9 14	2 1 1

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR			THE FLIGHT						TROP	STRAT
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
DEL-FRA																						
2/13/79	BBB	347 33	391 49	257 25	FLT	TOT:	95	0	60	45	4	2.6	.6	0.	144	36	45	70	25			
					IN	CLR:	82	0	53	39	3	0.0	0.0	0.	155	28	40	57	25			
					NOT	CLR:	13	0	7	6	1	18.7	4.1	0.	64	85	75	13	0			
2/16/79 *	BBB	327 34	330 49	198 25	FLT	TOT:	75	0	48	42	1	8.5	.7	0.	77	30	30	75	0			
					IN	CLR:	62	0	40	34	1	0.0	0.0	0.	80	21	26	62	0			
					NOT	CLR:	13	0	8	8	0	49.2	3.9	0.	58	67	43	13	0			
2/22/79	BBB	332 32	391 49	247 25	FLT	TOT:	83	0	54	47	0	1.5	.0	0.	153	14	47	64	19			
					IN	CLR:	81	0	53	45	0	0.0	0.0	0.	155	12	44	62	19			
					NOT	CLR:	2	0	1	2	0	63.1	.5	0.	49	65	104	2	0			
3/ 9/79 *	BBB	322 38	365 48	191 28	FLT	TOT:	66	0	43	36	1	3.9	.3	0.	141	32	31	53	13			
					IN	CLR:	57	0	38	35	0	0.0	0.0	0.	152	30	30	44	13			
					NOT	CLR:	9	0	5	1	1	28.9	2.4	0.	54	100	58	9	0			
3/14/79	BBB	360 37	391 49	280 28	FLT	TOT:	90	0	56	43	4	11.8	.9	0.	144	50	28	51	39			
					IN	CLR:	68	0	43	31	0	0.0	0.0	0.	172	39	18	32	36			
					NOT	CLR:	22	0	13	12	4	48.1	3.6	0.	52	81	54	19	3			
DEL-HKG																						
1/ 4/79 *	BBB	332 20	350 28	251 15	FLT	TOT:	61	0	38	27	0	.0	.1	0.	34	37	75	61	0			
					IN	CLR:	59	0	37	26	0	0.0	0.0	0.	34	36	73	59	0			
					NOT	CLR:	2	0	1	1	0	1.0	2.0	0.	21	83	122	2	0			
2/13/79 *	BBB	345 20	350 28	260 15	FLT	TOT:	58	0	38	30	0	.1	.0	0.	43	32	78	58	0			
					IN	CLR:	57	0	37	29	0	0.0	0.0	0.	43	30	77	57	0			
					NOT	CLR:	1	0	1	1	0	8.2	2.0	0.	52	74	109	1	0			
2/16/79	BBB	368 20	370 28	326 15	FLT	TOT:	49	0	9	27	0	.6	.3	0.	39	43	50	49	0			
					IN	CLR:	44	0	6	26	0	0.0	0.0	0.	38	42	49	44	0			
					NOT	CLR:	5	0	3	1	0	5.6	3.2	0.	40	52	66	5	0			
2/22/79 *	BBB	332 20	351 28	280 15	FLT	TOT:	60	0	39	32	0	0.0	0.0	0.	53	14	69	60	0			
					IN	CLR:	60	0	39	32	0	0.0	0.0	0.	53	14	69	60	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
3/ 9/79	BBB	354 25	371 27	291 19	FLT	TOT:	10	0	6	6	0	0.0	0.0	0.	52	20	44	10	0			
					IN	CLR:	10	0	6	6	0	0.0	0.0	0.	52	20	44	10	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
3/14/79 *	BBB	327 21	351 28	236 15	FLT	TOT:	63	0	39	27	0	1.2	.1	0.	45	27	126	63	0			
					IN	CLR:	59	0	35	24	0	0.0	0.0	0.	46	21	81	59	0			
					NOT	CLR:	4	0	4	3	0	18.6	1.5	0.	31	76	489	4	0			
5/11/79 *	BDB	307 20	311 28	223 15	FLT	TOT:	57	57	0	14	1	22.8	2.3	.440E+06	0	40	383	57	0			
					IN	CLR:	31	31	0	10	0	0.0	0.0	.155E+03	0	18	208	31	0			
					NOT	CLR:	26	26	0	4	1	50.0	5.0	.965E+06	0	94	823	26	0			

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT						TROP	STRAT	
							CLD	PD5	OZ	H20	H2S	%TIC	PATCHES	PD5	OZ	RH	H20	N	N	
DEL-HKG (CONT.)																				
5/30/79	BDB	365 20	370 27	223 15	FLT	TOT:	57	57	36	29	6	12.1	1.2	.247E+06	73	70	179	57	0	
					IN	CLR:	31	31	19	14	0	0.0	0.0	.433E+04	77	50	176	31	0	
					NOT	CLR:	26	26	17	15	6	26.6	2.7	.537E+06	69	88	183	26	0	
6/ 4/79 *	BDB	347 20	350 28	283 15	FLT	TOT:	55	55	35	17	0	10.4	1.6	.342E+06	78	60	227	55	0	
					IN	CLR:	37	37	23	10	0	0.0	0.0	.834E+03	82	46	184	37	0	
					NOT	CLR:	18	18	12	7	0	31.8	4.9	.104E+07	70	79	287	18	0	
10/15/78 *	BBB	329 17	350 28	243 8	FLT	TOT:	72	72	47	0	0	4.8	.3	.278E+05	42	0	0	72	0	
					IN	CLR:	64	64	43	0	0	0.0	0.0	.397E+02	43	0	0	64	0	
					NOT	CLR:	8	8	4	0	0	43.3	2.4	.250E+06	35	0	0	8	0	
10/29/78 *	BBB	331 20	350 28	207 15	FLT	TOT:	57	57	37	28	1	1.5	.5	.330E+04	34	44	197	57	0	
					IN	CLR:	49	49	31	26	1	0.0	0.0	.931E+02	34	43	191	49	0	
					NOT	CLR:	8	8	6	2	0	10.6	3.3	.230E+05	34	52	282	8	0	
12/26/78	BBB	367 20	370 28	269 15	FLT	TOT:	55	55	0	28	0	0.0	0.0	.116E+02	0	19	26	0	0	
					IN	CLR:	55	55	0	28	0	0.0	0.0	.116E+02	0	19	26	0	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
DEL-IST																				
1/ 4/79	BBB	313 34	350 40	240 28	FLT	TOT:	57	0	34	29	0	11.6	.8	0.	63	36	40	57	0	
					IN	CLR:	44	0	28	27	0	0.0	0.0	0.	65	33	40	44	0	
					NOT	CLR:	13	0	6	2	0	50.7	3.7	0.	55	78	45	13	0	
DEL-KHI																				
4/20/76 *	BBA	308 28	331 29	216 26	FLT	TOT:	5	0	5	0	0	12.9	2.0	0.	75	0	0	5	0	
					IN	CLR:	2	0	2	0	0	0.0	0.0	0.	71	0	0	2	0	
					NOT	CLR:	3	0	3	0	0	21.4	3.3	0.	77	0	0	3	0	
5/11/79	BDB	346 28	351 29	300 26	FLT	TOT:	11	11	0	6	0	0.0	0.0	.143E+03	0	21	76	11	0	
					IN	CLR:	11	11	0	6	0	0.0	0.0	.143E+03	0	21	76	11	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
6/ 4/79	BDB	337 28	350 29	276 26	FLT	TOT:	11	11	7	5	3	0.0	0.0	.568E+03	77	75	244	11	0	
					IN	CLR:	11	11	7	5	3	0.0	0.0	.568E+03	77	75	244	11	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
DEL-THR																				
1/24/76	BBA	343 30	350 34	216 28	FLT	TOT:	25	0	25	0	0	24.1	2.2	0.	29	0	0	25	0	
					IN	CLR:	9	0	9	0	0	0.0	0.0	0.	35	0	0	9	0	
					NOT	CLR:	16	0	16	0	0	37.6	3.4	0.	25	0	0	16	0	
3/20/76	BBA	337 30	350 35	206 28	FLT	TOT:	24	0	24	0	0	1.3	.1	0.	171	0	0	24	0	
					IN	CLR:	23	0	23	0	0	0.0	0.0	0.	176	0	0	23	0	
					NOT	CLR:	1	0	1	0	0	30.6	2.0	0.	55	0	0	1	0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N	
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
DEL-THR (CONT.)																				
3/23/76	*	BBA	363 30	372 35	221 28	FLT TOT:	21	0	21	0	0		.0	.0	0.	102	0	0	21	0
						IN CLR:	20	0	20	0	0		0.0	0.0	0.	102	0	0	20	0
						NOT CLR:	1	0	1	0	0		.4	1.0	0.	116	0	0	1	0
5/30/79	*	BDB	326 30	331 34	270 29	FLT TOT:	28	28	17	12	2		5.9	.6	.390E+05	66	58	183	28	0
						IN CLR:	23	23	14	8	1		0.0	0.0	.117E+05	67	50	198	23	0
						NOT CLR:	5	5	3	4	1		32.9	3.4	.165E+06	61	74	151	5	0
9/ 7/76		BBA	339 30	350 35	198 28	FLT TOT:	32	0	20	0	0		0.0	0.0	0.	43	0	0	32	0
						IN CLR:	32	0	20	0	0		0.0	0.0	0.	43	0	0	32	0
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
10/11/77	*	BCB	326 30	331 34	259 28	FLT TOT:	26	26	0	0	0		0.0	0.0	.334E+02	0	0	0	26	0
						IN CLR:	26	26	0	0	0		0.0	0.0	.334E+02	0	0	0	26	0
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
10/15/78		BBB	343 30	351 35	238 28	FLT TOT:	30	30	10	0	0		0.0	0.0	.235E+02	90	0	0	30	0
						IN CLR:	30	30	10	0	0		0.0	0.0	.235E+02	90	0	0	30	0
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
10/29/78		BBB	280 30	280 35	269 28	FLT TOT:	34	34	20	19	0		0.0	0.0	.571E+01	45	41	135	34	0
						IN CLR:	34	34	20	19	0		0.0	0.0	.571E+01	45	41	135	34	0
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
12/ 7/78	*	BBB	290 30	290 34	290 28	FLT TOT:	28	28	18	13	0		5.6	.9	.117E+06	51	35	80	28	0
						IN CLR:	23	23	15	10	0		0.0	0.0	.111E+02	52	23	59	23	0
						NOT CLR:	5	5	3	3	0		31.4	5.2	.657E+06	42	75	148	5	0
12/26/78	*	BBB	329 30	331 35	285 28	FLT TOT:	29	29	0	16	1		21.6	.8	.645E+05	0	49	51	0	0
						IN CLR:	18	18	0	10	0		0.0	0.0	0.	0	40	46	0	0
						NOT CLR:	11	11	0	6	1		57.0	2.2	.170E+06	0	63	61	0	0
DEN-LAX																				
2/ 6/76	*	CAA	339 37	370 39	212 34	FLT TOT:	12	0	12	9	0		1.7	.1	0.	97	34	63	3	9
						IN CLR:	11	0	11	8	0		0.0	0.0	0.	102	33	64	2	9
						NOT CLR:	1	0	1	1	0		20.0	1.0	0.	39	39	56	1	0
2/15/79	*	CAB	352 37	371 40	221 35	FLT TOT:	14	14	9	7	0		0.0	0.0	.943E+02	123	47	82	14	0
						IN CLR:	14	14	9	7	0		0.0	0.0	.943E+02	123	47	82	14	0
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
2/22/79	*	CAB	360 37	371 39	281 35	FLT TOT:	14	14	9	6	1		0.0	0.0	.304E+02	391	68	76	2	12
						IN CLR:	14	14	9	6	1		0.0	0.0	.304E+02	391	68	76	2	12
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0
3/13/79	*	CAB	347 36	370 39	246 35	FLT TOT:	7	7	3	4	0		11.8	.4	.230E+05	349	31	28	1	6
						IN CLR:	4	4	2	2	0		0.0	0.0	.631E+04	346	37	17	0	4
						NOT CLR:	3	3	1	2	0		27.5	1.0	.452E+05	354	24	38	1	2

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP	STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N		
DEN-LAX (CONT.)																				
3/13/79		CAB	368 38	391 39	283 35	FLT IN NOT	TOT: CLR: CLR:	7 5 2	7 5 2	2 1 0	2 2 0	1 1 0	.2 0.0 .8	0.0 0.0 0.0	.110E+05 .494E+02 .385E+05	494 454 534	65 65 0	29 29 0	1 1 0	6 4 2
3/17/79	*	CAB	364 37	371 39	313 35	FLT IN NOT	TOT: CLR: CLR:	13 13 0	13 13 0	8 8 0	7 7 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.384E+03 .384E+03 0.	417 417 0	75 75 0	58 58 0	1 1 0	12 12 0
3/20/79	*	CAB	318 37	332 39	211 35	FLT IN NOT	TOT: CLR: CLR:	15 13 2	15 13 2	9 8 1	9 7 2	3 3 0	5.3 0.0 39.4	.1 0.0 1.0	.579E+04 .412E+04 .166E+05	189 207 48	64 76 24	86 93 60	10 8 2	5 5 0
3/22/79	*	CAB	289 38	370 39	200 35	FLT IN NOT	TOT: CLR: CLR:	14 11 3	14 11 3	6 5 1	5 4 1	0 0 0	3.3 0.0 15.3	.4 0.0 1.7	.133E+04 .772E+03 .339E+04	236 264 95	61 53 95	249 211 400	8 5 3	6 6 0
3/29/79		CAB	383 37	390 39	308 35	FLT IN NOT	TOT: CLR: CLR:	14 14 0	14 14 0	9 9 0	1 1 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.455E+02 .455E+02 0.	509 509 0	100 100 0	123 123 0	1 1 0	13 13 0
4/ 9/76		CAA	364 37	389 40	216 35	FLT IN NOT	TOT: CLR: CLR:	9 8 1	0 0 0	9 8 1	9 8 1	2 1 1	1.2 0.0 11.0	.1 0.0 1.0	0. 0. 0.	159 170 78	94 94 100	158 170 59	9 8 1	0 0 0
4/ 9/76	*	CAA	345 37	371 39	214 35	FLT IN NOT	TOT: CLR: CLR:	8 8 0	0 0 0	8 8 0	8 8 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	97 97 0	89 89 0	163 163 0	8 8 0	0 0 0
4/18/76	*	CAA	346 36	370 38	216 34	FLT IN NOT	TOT: CLR: CLR:	7 7 0	0 0 0	7 7 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	194 194 0	0 0 0	0 0 0	5 5 0	2 2 0
5/11/76	*	CAA	394 37	430 39	220 34	FLT IN NOT	TOT: CLR: CLR:	17 16 1	0 0 0	11 10 1	0 0 0	0 0 0	3.0 0.0 51.0	.2 0.0 3.0	0. 0. 0.	255 275 60	0 0 0	0 0 0	7 6 1	10 10 0
5/11/76		CAA	362 37	409 40	220 34	FLT IN NOT	TOT: CLR: CLR:	16 4 12	0 0 0	11 3 8	0 0 0	0 0 0	36.4 0.0 48.6	1.8 0.0 2.4	0. 0. 0.	144 193 126	0 0 0	0 0 0	16 4 12	0 0 0
6/15/78		CAB	375 37	391 39	261 35	FLT IN NOT	TOT: CLR: CLR:	17 17 0	17 17 0	10 10 0	8 8 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.677E+03 .677E+03 0.	76 76 0	40 40 0	34 34 0	17 17 0	0 0 0
6/28/78		CAB	365 37	390 39	240 35	FLT IN NOT	TOT: CLR: CLR:	16 15 1	16 15 1	10 10 0	10 9 1	0 0 0	.5 0.0 8.2	.1 0.0 2.0	.787E+02 .839E+02 0.	105 105 0	29 29 28	48 51 27	16 15 1	0 0 0
6/ 3/79		CAB	362 37	390 39	228 34	FLT IN NOT	TOT: CLR: CLR:	13 10 3	13 10 3	0 0 0	9 7 2	0 0 0	5.3 0.0 23.0	.2 0.0 .7	.104E+05 .225E+04 .377E+05	0 0 0	30 37 7	25 20 43	13 10 3	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT					TROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
DEN-LAX (CONT.)																				
6/	5/79	* CAB	368 37	371 39	333 35	FLT IN NOT	TOT: CLR: CLR:	15 7 8	15 7 8	0 0 0	7 2 5	0 0 0	31.0 0.0 58.0	1.5 0.0 2.9	.988E+05 .103E+05 .176E+06	0 0 0	75 81 72	33 43 29	15 7 8	0 0 0
7/	1/78	* CAB	347 37	371 39	190 35	FLT IN NOT	TOT: CLR: CLR:	14 14 0	14 14 0	9 9 0	8 8 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.123E+03 .123E+03 0.	74 74 0	17 17 0	261 261 0	14 14 0	0 0 0
7/	6/78	* CAB	347 37	371 39	230 35	FLT IN NOT	TOT: CLR: CLR:	13 12 1	13 12 1	7 7 0	7 7 0	0 0 0	.0 0.0 .4	.1 0.0 1.0	.349E+02 .327E+02 .616E+02	182 182 0	8 8 0	11 11 0	13 12 1	0 0 0
7/	8/78	* CAB	360 37	371 39	312 35	FLT IN NOT	TOT: CLR: CLR:	13 10 3	13 10 3	8 5 3	7 4 3	0 0 0	2.7 0.0 11.6	.7 0.0 3.0	.380E+04 .627E+01 .164E+05	45 47 42	5 6 3	6 8 3	13 10 3	0 0 0
DEN-ORD																				
2/15/79		CAB	360 41	370 42	290 40	FLT IN NOT	TOT: CLR: CLR:	12 12 0	12 12 0	7 7 0	6 6 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.848E+02 .848E+02 0.	75 75 0	43 43 0	60 60 0	12 12 0	0 0 0
2/22/79		CAB	370 41	370 42	369 40	FLT IN NOT	TOT: CLR: CLR:	11 11 0	11 11 0	7 7 0	4 4 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.458E+02 .458E+02 0.	111 111 0	100 100 0	36 36 0	9 9 0	2 2 0
3/13/79	*	CAB	316 41	391 42	201 40	FLT IN NOT	TOT: CLR: CLR:	14 8 6	13 7 6	6 4 2	6 4 2	0 0 0	36.7 0.0 85.6	.4 0.0 .8	.769E+05 .402E+04 .162E+06	322 434 99	21 20 21	46 28 81	6 1 5	8 7 1
3/13/79		CAB	352 41	371 42	283 40	FLT IN NOT	TOT: CLR: CLR:	10 6 4	8 4 4	5 4 1	5 3 2	0 0 0	25.6 0.0 64.1	.8 0.0 2.0	.424E+05 .171E+04 .831E+05	322 362 164	23 22 25	13 12 15	1 0 1	9 6 3
3/17/79		CAB	392 41	410 42	270 40	FLT IN NOT	TOT: CLR: CLR:	14 12 2	14 12 2	9 8 1	7 6 1	6 6 0	5.6 0.0 39.0	.6 0.0 4.0	.352E+05 .357E+03 .244E+06	346 383 51	89 100 25	37 32 65	2 0 2	12 12 0
3/20/79		CAB	345 41	371 42	260 40	FLT IN NOT	TOT: CLR: CLR:	12 5 7	12 5 7	8 2 6	6 2 4	4 1 3	23.1 0.0 39.6	1.3 0.0 2.3	.338E+05 .305E+03 .578E+05	121 186 100	90 99 86	66 64 67	6 0 6	6 5 1
3/22/79		CAB	343 41	370 42	210 40	FLT IN NOT	TOT: CLR: CLR:	9 6 3	9 6 3	4 2 2	4 3 1	0 0 0	1.4 0.0 4.3	.4 0.0 1.3	.124E+05 .274E+04 .317E+05	116 181 52	50 64 7	39 31 65	2 1 1	7 5 2
3/29/79	*	CAB	380 42	391 42	259 40	FLT IN NOT	TOT: CLR: CLR:	18 14 4	18 14 4	10 9 1	0 0 0	0 0 0	9.7 0.0 43.8	.4 0.0 2.0	.443E+05 .392E+03 .198E+06	190 209 36	0 0 0	0 0 0	10 6 4	8 8 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT					TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	

# DEN-ORD (CONT.)

6/15/78	*	CAB	371 39	410 41	201 39	FLT TOT: IN CLR: NOT CLR:	17 13 4	17 13 4	10 8 2	8 8 0	3 3 0	10.8 0.0 46.0	.4 0.0 1.5	.361E+05 .591E+02 .153E+06	78 80 67	82 82 0	105 105 0	17 13 4	0 0 0
6/28/78	*	CAB	372 41	391 42	222 40	FLT TOT: IN CLR: NOT CLR:	18 17 1	18 17 1	11 10 1	10 10 0	0 0 0	1.5 0.0 26.7	.2 0.0 4.0	.298E+03 .166E+03 .255E+04	65 67 40	43 43 0	27 27 0	18 17 1	0 0 0
6/ 3/79	*	CAB	371 41	390 42	200 40	FLT TOT: IN CLR: NOT CLR:	17 15 2	17 15 2	0 0 0	9 9 0	0 0 0	6.1 0.0 52.0	.1 0.0 1.0	.107E+05 .427E+04 .593E+05	0 0 0	43 43 0	29 29 0	6 4 2	11 11 0
6/ 5/79		CAB	393 41	411 43	284 40	FLT TOT: IN CLR: NOT CLR:	14 13 1	14 13 1	0 0 0	7 7 0	1 1 0	.8 0.0 11.8	.1 0.0 1.0	.272E+04 .188E+04 .137E+05	0 0 0	40 40 0	24 24 0	7 6 1	7 7 0
7/ 1/78		CAB	352 41	370 42	203 40	FLT TOT: IN CLR: NOT CLR:	16 14 2	16 14 2	10 9 1	10 9 1	0 0 0	.2 0.0 1.6	.3 0.0 2.0	.103E+03 .113E+03 .319E+02	91 92 83	4 4 3	6 6 5	16 14 2	0 0 0
7/ 6/78		CAB	361 41	370 42	301 40	FLT TOT: IN CLR: NOT CLR:	12 3 9	12 3 9	7 1 6	2 1 1	0 0 0	40.7 0.0 54.2	2.2 0.0 2.9	.128E+06 .152E+03 .171E+06	66 105 59	38 16 59	38 17 59	12 3 9	0 0 0
7/ 8/78		CAB	356 41	371 42	232 40	FLT TOT: IN CLR: NOT CLR:	14 14 0	14 14 0	8 8 0	8 8 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.330E+02 .330E+02 0.	56 56 0	26 26 0	68 68 0	14 14 0	0 0 0

APPENDIX B

# DFW-HNL

3/28/77		AAA	408 30	421 35	272 21	FLT TOT: IN CLR: NOT CLR:	85 85 0	85 85 0	0 0 0	70 70 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.368E+01 .368E+01 0.	0 0 0	18 18 0	12 12 0	0 0 0	0 0 0
3/30/77	*	AAA	418 30	431 34	221 22	FLT TOT: IN CLR: NOT CLR:	64 64 0	64 64 0	0 0 0	54 54 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.711E+01 .711E+01 0.	0 0 0	15 15 0	17 17 0	0 0 0	0 0 0
5/ 2/77		AAA	410 31	420 35	326 21	FLT TOT: IN CLR: NOT CLR:	78 64 14	78 64 14	52 44 8	0 0 0	0 0 0	4.6 0.0 25.7	.2 0.0 1.4	.102E+05 .588E+03 .541E+05	309 341 138	0 0 0	0 0 0	43 29 14	35 35 0
5/ 4/77	*	AAA	380 30	390 33	247 22	FLT TOT: IN CLR: NOT CLR:	72 62 10	72 62 10	44 38 6	0 0 0	0 0 0	11.7 0.0 84.5	.4 0.0 2.9	.515E+05 .118E+03 .370E+06	101 109 53	0 0 0	0 0 0	66 56 10	6 6 0
5/ 9/77		AAA	405 32	420 38	224 22	FLT TOT: IN CLR: NOT CLR:	86 79 7	86 79 7	55 50 5	0 0 0	0 0 0	2.9 0.0 35.1	.3 0.0 4.0	.408E+05 .127E+03 .500E+06	262 278 102	0 0 0	0 0 0	37 30 7	49 49 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT					TROP	STRAT
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
DFW-HNL (CONT.)																				
5/11/77	*	AAA	393 31	411 34	339 22	FLT IN NOT	TOT: CLR: CLR:	66 49 17	66 49 17	45 34 11	0 0 0	10.7 0.0 41.4	.3 0.0 1.2	.146E+05 .109E+03 .565E+05	232 298 29	0 0 0	0 0 0	37 20 17	29 29 0	
5/16/77		AAA	390 30	401 35	235 21	FLT IN NOT	TOT: CLR: CLR:	40 40 0	40 40 0	25 25 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.900E+02 .900E+02 0.	128 128 0	0 0 0	0 0 0	30 30 0	10 10 0	
5/18/77	*	AAA	400 27	411 32	370 22	FLT IN NOT	TOT: CLR: CLR:	23 23 0	23 23 0	11 11 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.228E+02 .228E+02 0.	243 243 0	0 0 0	0 0 0	14 14 0	9 9 0	
12/13/76		AAA	413 31	430 34	289 22	FLT IN NOT	TOT: CLR: CLR:	80 80 0	0 0 0	52 52 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	104 104 0	0 0 0	0 0 0	51 51 0	29 29 0	
12/15/76	*	AAA	337 30	340 33	248 22	FLT IN NOT	TOT: CLR: CLR:	72 71 1	0 0 0	48 48 0	0 0 0	.0 0.0 3.5	.1 0.0 4.0	0. 0. 0.	61 61 0	0 0 0	0 0 0	72 71 1	0 0 0	
12/20/76		AAA	347 32	350 38	190 22	FLT IN NOT	TOT: CLR: CLR:	86 53 33	0 0 0	49 33 16	45 28 17	11.6 0.0 30.1	1.3 0.0 3.4	0. 0. 0.	95 113 58	73 62 92	64 65 64	72 39 33	14 14 0	
12/22/76	*	AAA	426 29	450 33	280 22	FLT IN NOT	TOT: CLR: CLR:	66 66 0	0 0 0	45 45 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	160 160 0	0 0 0	0 0 0	42 42 0	24 24 0	
12/27/76		AAA	339 30	351 34	269 21	FLT IN NOT	TOT: CLR: CLR:	95 52 43	0 0 0	13 9 4	0 0 0	16.4 0.0 36.2	1.0 0.0 2.2	0. 0. 0.	62 62 62	0 0 0	0 0 0	95 52 43	0 0 0	
12/29/76	*	AAA	421 31	430 35	314 22	FLT IN NOT	TOT: CLR: CLR:	67 66 1	0 0 0	44 43 1	53 53 0	.0 0.0 .6	.0 0.0 1.0	0. 0. 0.	137 139 63	46 46 0	15 15 0	20 19 1	47 47 0	
DFW-JFK																				
3/28/77	*	AAA	420 37	433 40	217 33	FLT IN NOT	TOT: CLR: CLR:	29 23 6	29 23 6	0 0 0	23 18 5	8 3 5	10.5 0.0 50.7	.5 0.0 2.3	.489E+05 .180E+02 .236E+06	0 0 0	54 41 100	13 14 10	0 0 0	0 0 0
3/30/77		AAA	404 37	410 39	345 33	FLT IN NOT	TOT: CLR: CLR:	22 21 1	22 21 1	0 0 0	19 18 1	0 0 0	.2 0.0 3.5	.0 0.0 1.0	.257E+01 .270E+01 0.	0 0 0	23 20 84	15 12 53	0 0 0	0 0 0
5/ 2/77	*	AAA	422 37	429 40	274 34	FLT IN NOT	TOT: CLR: CLR:	29 27 2	29 27 2	18 17 1	0 0 0	2.0 0.0 28.6	.1 0.0 1.5	.125E+05 .901E+02 .180E+06	304 318 74	0 0 0	0 0 0	2 1 1	27 26 1	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT					TROP	STRAT
						CLD	PD5	OZ	H2O	H2S		%TIC	PATCHES	PD5	OZ	RH	H2O		N	N
DFW-JFK (CONT.)																				
5/ 4/77	AAA	415 37	430 39	329 33	FLT TOT: IN CLR: NOT CLR:	24 12 12	24 12 12	15 8 7	0 0 0	0 0 0	23.5 0.0 47.1	.9 0.0 1.8	.628E+05 .515E+02 .126E+06	233 314 142	0 0 0	0 0 0	13 1 12		11 11 0	
5/ 9/77 *	AAA	417 37	430 40	264 33	FLT TOT: IN CLR: NOT CLR:	26 24 2	26 24 2	15 14 1	0 0 0	0 0 0	.9 0.0 12.2	.0 0.0 .5	.490E+04 .373E+02 .632E+05	472 503 39	0 0 0	0 0 0	2 0 2		24 24 0	
5/11/77	AAA	398 37	410 39	223 33	FLT TOT: IN CLR: NOT CLR:	24 22 2	24 22 2	16 15 1	0 0 0	0 0 0	1.1 0.0 12.7	.1 0.0 1.5	.227E+02 .247E+02 0.	348 369 38	0 0 0	0 0 0	2 0 2		22 22 0	
5/16/77 *	AAA	399 36	430 39	206 33	FLT TOT: IN CLR: NOT CLR:	10 9 1	10 9 1	4 4 0	0 0 0	0 0 0	5.1 0.0 50.6	.5 0.0 5.0	0. 0. 0.	90 90 0	0 0 0	0 0 0	6 5 1		4 4 0	
5/18/77	AAA	404 37	410 39	367 33	FLT TOT: IN CLR: NOT CLR:	7 5 2	7 5 2	3 3 0	0 0 0	0 0 0	10.3 0.0 35.9	.9 0.0 3.0	.855E+05 0. .299E+06	150 150 0	0 0 0	0 0 0	5 4 1		2 1 1	
12/13/76 *	AAA	425 37	430 40	342 34	FLT TOT: IN CLR: NOT CLR:	32 32 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	6 6 0		26 26 0	
12/15/76	AAA	327 36	331 39	271 33	FLT TOT: IN CLR: NOT CLR:	25 23 2	0 0 0	17 16 1	0 0 0	0 0 0	3.5 0.0 43.3	.4 0.0 5.5	0. 0. 0.	59 60 51	0 0 0	0 0 0	25 23 2		0 0 0	
12/20/76 *	AAA	348 37	350 40	318 34	FLT TOT: IN CLR: NOT CLR:	36 28 8	0 0 0	23 18 5	0 0 0	0 0 0	7.5 0.0 34.0	1.4 0.0 6.4	0. 0. 0.	110 126 50	0 0 0	0 0 0	36 28 8		0 0 0	
12/22/76	AAA	438 37	450 39	314 33	FLT TOT: IN CLR: NOT CLR:	24 24 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	2 2 0		22 22 0	
12/27/76 *	AAA	342 37	350 40	193 33	FLT TOT: IN CLR: NOT CLR:	32 20 12	0 0 0	21 11 10	0 0 0	0 0 0	13.3 0.0 35.6	1.0 0.0 2.6	0. 0. 0.	87 110 61	0 0 0	0 0 0	25 13 12		7 7 0	
12/29/76	AAA	398 37	410 39	240 33	FLT TOT: IN CLR: NOT CLR:	22 22 0	0 0 0	14 14 0	17 17 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	492 492 0	23 23 0	19 19 0	4 4 0		18 18 0	
DRW-SYD																				
8/18/76 *	DDA	347 -23	352 -14	273 -33	FLT TOT: IN CLR: NOT CLR:	37 37 0	0 0 0	24 24 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	35 35 0	0 0 0	0 0 0	37 37 0		0 0 0	

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS				NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TRCP N	STRAT N
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
DRW-SYD (CONT.)																				
8/20/76	DDA	344 -24	370 -14	223 -33	FLT IN	TOT CLR	33 33	0 0	20 20	0 0	0 0	0 0	0.0 0.0	0.0 0.0	0. 0.	40 40	0 0	0 0	33 33	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
DTW-HNL																				
4/25/76	* CAA	326 38	370 42	194 29	FLT IN	TOT CLR	42 39	0 0	42 39	0 0	0 0	0 0	2.0 0.0	.3 0.0	0. 0.	147 153	0 0	0 0	37 34	5 5
					NOT	CLR	3	0	3	0	0	0	28.0	4.3	0.	72	0	0	3	0
DTW-IAD																				
6/ 6/79	* BDB	294 41	311 41	228 40	FLT IN	TOT CLR	5 5	5 5	2 2	1 1	1 1	0 0	0.0 0.0	0.0 0.0	.183E+04 .183E+04	53 53	100 100	296 296	5 5	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
9/30/78	* BBB	303 40	311 41	283 40	FLT IN	TOT CLR	5 3	5 3	3 1	0 0	0 0	0 0	22.5 0.0	1.6 0.0	.631E+06 .410E+04	75 55	0 0	0 0	5 3	0 0
					NOT	CLR	2	2	2	0	0	0	56.3	4.0	.157E+07	85	0	0	2	0
10/ 1/78	BBB	263 41	291 42	245 40	FLT IN	TOT CLR	6 1	6 1	3 1	0 0	0 0	0 0	54.1 0.0	3.2 0.0	.540E+06 .625E+02	67 50	0 0	0 0	6 1	0 0
					NOT	CLR	5	5	2	0	0	0	64.9	3.8	.648E+06	76	0	0	5	0
10/ 6/78	* BBB	298 41	310 41	250 40	FLT IN	TOT CLR	5 5	5 5	2 2	0 0	0 0	0 0	0.0 0.0	0.0 0.0	.798E+03 .798E+03	148 148	0 0	0 0	5 5	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
10/ 7/78	* BBB	300 40	310 41	258 40	FLT IN	TOT CLR	6 5	6 5	3 3	0 0	0 0	0 0	7.5 0.0	.2 0.0	.215E+05 .148E+03	115 115	0 0	0 0	6 5	0 0
					NOT	CLR	1	1	0	0	0	0	44.7	1.0	.128E+06	0	0	0	1	0
10/ 7/78	BBB	278 40	291 41	232 39	FLT IN	TOT CLR	5 5	5 5	2 2	0 0	0 0	0 0	0.0 0.0	0.0 0.0	.296E+03 .296E+03	90 90	0 0	0 0	5 5	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
11/16/78	BBB	277 40	290 41	226 39	FLT IN	TOT CLR	5 0	5 0	2 0	3 0	2 0	2 0	80.2 0.0	2.0 0.0	.230E+06 0.	23 0	96 0	271 0	5 0	0 0
					NOT	CLR	5	5	2	3	2	2	80.2	2.0	.230E+06	23	96	271	5	0
12/15/78	BBB	277 40	289 41	227 39	FLT IN	TOT CLR	5 5	5 5	2 2	0 0	0 0	0 0	0.0 0.0	0.0 0.0	0. 0.	46 46	0 0	0 0	0 0	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
12/15/78	* BBB	294 40	310 41	240 40	FLT IN	TOT CLR	6 6	6 6	3 3	3 3	0 0	0 0	0.0 0.0	0.0 0.0	.110E+02 .110E+02	30 30	53 53	55 55	0 0	0 0
					NOT	CLR	0	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N	
DTW-LHR																			
5/26/77	AAA	393 47	410 51	270 42	FLT TOT: IN CLR: NOT CLR:	36 33 3	36 33 3	20 19 1	0 0 0	0 0 0	1.7 0.0 20.1	.3 0.0 3.0	.163E+03 .398E+01 .191E+04	543 560 217	0 0 0	0 0 0	5 3 2	31 30 1	
5/27/77	* AAA	382 51	391 56	216 43	FLT TOT: IN CLR: NOT CLR:	38 36 2	38 36 2	19 17 2	0 0 0	0 0 0	.8 0.0 16.1	.0 0.0 .5	.106E+04 .136E+02 .199E+05	360 389 121	0 0 0	0 0 0	6 4 2	32 32 0	
FAI-SEA																			
12/13/77	BCB	366 57	370 64	291 49	FLT TOT: IN CLR: NOT CLR:	27 27 0	27 27 0	17 17 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.209E+02 .209E+02 0.	259 259 0	0 0 0	0 0 0	1 1 0	26 26 0	
12/13/77	* BCB	343 57	351 64	266 49	FLT TOT: IN CLR: NOT CLR:	29 29 0	29 29 0	18 18 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.724E+02 .724E+02 0.	196 196 0	0 0 0	0 0 0	15 15 0	14 14 0	
FCO-IST																			
1/ 6/79	BBB	345 43	371 44	224 41	FLT TOT: IN CLR: NOT CLR:	16 15 1	0 0 0	9 9 0	7 7 0	2 2 0	.1 0.0 1.2	.1 0.0 1.0	0. 0. 0.	207 207 0	55 55 0	62 62 0	16 15 1	0 0 0	
1/ 7/79	* BBB	268 43	280 44	260 42	FLT TOT: IN CLR: NOT CLR:	18 18 0	0 0 0	11 11 0	10 10 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	67 67 0	26 26 0	46 46 0	18 18 0	0 0 0	
2/24/79	BBB	326 43	330 44	276 41	FLT TOT: IN CLR: NOT CLR:	15 12 3	0 0 0	9 7 2	7 4 3	2 0 2	10.6 0.0 52.9	.5 0.0 2.7	0. 0. 0.	136 152 82	57 27 97	20 10 34	11 8 3	4 4 0	
2/25/79	* BBB	303 43	310 44	280 42	FLT TOT: IN CLR: NOT CLR:	18 16 2	0 0 0	11 9 2	7 5 2	0 0 0	.9 0.0 8.2	.2 0.0 2.0	0. 0. 0.	69 74 48	39 35 49	19 15 27	18 16 2	0 0 0	
3/16/79	BBB	317 43	331 44	230 41	FLT TOT: IN CLR: NOT CLR:	15 13 2	0 0 0	9 8 1	8 7 1	0 0 0	1.7 0.0 12.5	.3 0.0 2.5	0. 0. 0.	213 202 303	43 36 99	42 40 55	15 13 2	0 0 0	
3/17/79	* BBB	388 43	391 44	364 42	FLT TOT: IN CLR: NOT CLR:	12 11 1	0 0 0	0 0 0	4 4 0	0 0 0	4.7 0.0 56.9	.3 0.0 4.0	0. 0. 0.	0 0 0	19 19 0	35 35 0	0 0 0	12 11 1	
11/22/78	BBB	300 43	330 44	227 41	FLT TOT: IN CLR: NOT CLR:	18 18 0	18 18 0	11 11 0	10 10 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.105E+02 .109E+02 0.	56 56 0	44 44 0	74 74 0	18 18 0	0 0 0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR		THE FLIGHT						
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	TROP N	STRAT N	
FCO-1ST (CONT.)																				
11/23/78	*	BBB	272 43	350 44	200 42	FLT TOT: IN CLR: NOT CLR:	16 16 0	16 16 0	10 10 0	10 10 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.722E+02 .722E+02 0.	52 52 0	18 18 0	40 40 0	16 16 0	0 0 0	
11/25/78		BBB	342 43	370 44	265 41	FLT TOT: IN CLR: NOT CLR:	16 16 0	16 16 0	10 10 0	9 9 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.841E+01 .841E+01 0.	60 60 0	40 40 0	19 19 0	6 6 0	10 10 0	
11/26/78	*	BBB	301 43	310 44	193 42	FLT TOT: IN CLR: NOT CLR:	18 13 5	18 13 5	11 8 3	8 6 2	1 1 0	6.4 0.0 23.1	1.3 0.0 4.6	.227E+05 .102E+02 .817E+05	75 89 40	56 52 68	33 34 30	18 13 5	0 0 0	
11/28/78		BBB	316 43	370 44	231 41	FLT TOT: IN CLR: NOT CLR:	17 10 7	17 10 7	10 7 3	10 7 3	0 0 0	26.1 0.0 68.1	2.4 0.0 5.7	.191E+06 .670E+01 .464E+06	231 315 35	30 19 56	33 9 91	8 1 7	9 9 0	
11/29/78	*	BBB	316 43	390 44	260 42	FLT TOT: IN CLR: NOT CLR:	12 5 7	12 5 7	5 3 2	6 4 2	1 0 1	43.4 0.0 74.3	2.2 0.0 3.7	.533E+06 0. .913E+06	313 515 10	56 35 97	53 17 125	7 0 7	5 5 0	
12/ 4/78		BBB	309 43	331 44	230 42	FLT TOT: IN CLR: NOT CLR:	15 5 10	15 5 10	9 2 7	8 3 5	4 1 3	21.4 0.0 32.1	1.5 0.0 2.3	.411E+05 .461E+03 .614E+05	54 75 48	97 96 97	66 23 91	15 5 10	0 0 0	
12/17/78		BBB	309 43	331 44	257 41	FLT TOT: IN CLR: NOT CLR:	15 13 2	15 13 2	9 8 1	8 7 1	2 1 1	.9 0.0 6.5	.3 0.0 2.0	.183E+04 .192E+03 .125E+05	42 41 53	63 58 100	66 64 80	0 0 0	0 0 0	
12/18/78	*	BBB	298 43	310 44	240 42	FLT TOT: IN CLR: NOT CLR:	21 17 4	21 17 4	13 10 3	10 8 2	2 1 1	3.2 0.0 16.8	.7 0.0 3.5	.717E+04 .347E+02 .375E+05	41 40 43	55 44 96	87 46 250	0 0 0	0 0 0	
12/20/78		BBB	285 43	291 44	230 42	FLT TOT: IN CLR: NOT CLR:	13 13 0	13 13 0	8 8 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.501E+02 .501E+02 0.	89 89 0	36 36 0	48 48 0	0 0 0	0 0 0	
12/21/78	*	BBB	296 43	310 44	240 42	FLT TOT: IN CLR: NOT CLR:	20 9 11	20 9 11	11 5 6	7 0 7	5 0 5	27.6 0.0 50.2	1.6 0.0 2.9	.693E+05 .217E+02 .126E+06	37 41 34	99 0 99	74 0 74	0 0 0	0 0 0	
12/23/78		BBB	293 43	331 44	250 42	FLT TOT: IN CLR: NOT CLR:	17 3 14	17 3 14	0 0 0	10 1 9	3 0 3	40.2 0.0 48.8	3.3 0.0 4.0	.154E+06 .547E+03 .186E+06	0 0 0	81 53 84	78 32 83	0 0 0	0 0 0	
12/24/78	*	BBB	364 43	389 44	267 42	FLT TOT: IN CLR: NOT CLR:	16 12 4	16 12 4	0 0 0	8 7 1	0 0 0	10.2 0.0 40.7	.6 0.0 2.5	.245E+05 .221E+02 .981E+05	0 0 0	43 47 20	22 22 23	0 0 0	0 0 0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT								
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	TROP N	STRAT N	
FCO-JFK																				
1/27/76	*	BBA	349 47	370 51	165 41	FLT TOT: IN CLR: NOT CLR:	52 32 20	0 0 0	52 32 20	0 0 0	0 0 0	15.6 0.0 40.7	.6 0.0 1.5	0. 0. 0.	180 226 108	0 0 0	0 0 0	31 16 15	21 16 5	
1/28/76	*	BBA	359 48	390 52	208 41	FLT TOT: IN CLR: NOT CLR:	52 23 29	0 0 0	52 23 29	0 0 0	0 0 0	44.3 0.0 79.5	1.4 0.0 2.4	0. 0. 0.	158 312 36	0 0 0	0 0 0	34 7 27	18 16 2	
1/28/76		BBA	329 44	390 48	203 41	FLT TOT: IN CLR: NOT CLR:	66 39 27	0 0 0	66 39 27	0 0 0	0 0 0	22.9 0.0 56.0	1.1 0.0 2.6	0. 0. 0.	71 91 41	0 0 0	0 0 0	66 39 27	0 0 0	
1/ 6/79	*	BBB	330 51	369 55	246 42	FLT TOT: IN CLR: NOT CLR:	67 45 22	0 0 0	44 30 14	38 25 13	3 0 3	19.6 0.0 59.8	1.2 0.0 3.7	0. 0. 0.	104 134 41	48 33 79	28 20 44	46 26 20	21 19 2	
2/24/79	*	BBB	326 46	370 48	202 41	FLT TOT: IN CLR: NOT CLR:	69 49 20	0 0 0	44 30 14	34 20 14	2 2 0	9.1 0.0 31.4	.8 0.0 2.9	0. 0. 0.	137 173 59	53 44 66	39 39 39	49 30 19	20 19 1	
2/25/79		BBB	327 47	370 49	199 41	FLT TOT: IN CLR: NOT CLR:	71 36 35	0 0 0	47 23 24	34 18 16	1 1 0	17.7 0.0 35.9	1.5 0.0 3.1	0. 0. 0.	83 96 71	55 48 62	59 24 98	71 36 35	0 0 0	
3/16/79	*	BBB	331 44	371 46	260 41	FLT TOT: IN CLR: NOT CLR:	82 73 9	0 0 0	53 49 4	45 41 4	3 1 2	6.2 0.0 56.7	.3 0.0 2.8	0. 0. 0.	214 228 50	35 31 82	30 27 56	15 15 0	35 35 0	
4/12/76		BBA	361 45	390 46	194 41	FLT TOT: IN CLR: NOT CLR:	56 52 4	0 0 0	56 52 4	0 0 0	0 0 0	.1 0.0 1.3	.1 0.0 1.3	0. 0. 0.	223 215 328	0 0 0	0 0 0	41 39 2	15 13 2	
4/12/76	*	BBA	306 47	370 51	203 41	FLT TOT: IN CLR: NOT CLR:	49 44 5	0 0 0	49 44 5	0 0 0	0 0 0	1.0 0.0 9.6	.3 0.0 3.2	0. 0. 0.	172 179 114	0 0 0	0 0 0	38 33 5	11 11 0	
5/28/79	*	BDB	347 45	370 46	215 41	FLT TOT: IN CLR: NOT CLR:	80 69 11	30 69 11	50 44 6	34 30 4	1 1 0	1.7 0.0 12.4	.4 0.0 2.8	.214E+05 .182E+04 .144E+06	206 223 80	52 49 76	43 43 45	58 47 11	22 22 0	
5/28/79		BDB	325 50	350 56	215 41	FLT TOT: IN CLR: NOT CLR:	94 73 21	94 73 21	62 50 12	54 40 14	10 3 7	4.8 0.0 21.6	1.0 0.0 4.5	.115E+06 .432E+04 .499E+06	183 206 85	59 49 89	82 61 142	72 51 21	22 22 0	
9/20/76		BBA	362 50	370 56	240 42	FLT TOT: IN CLR: NOT CLR:	89 39 0	0 0 0	57 57 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	76 76 0	0 0 0	0 0 0	64 64 0	25 25 0	
9/20/76	*	BBA	332 45	370 47	269 41	FLT TOT: IN CLR: NOT CLR:	75 75 0	0 0 0	43 48 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	60 60 0	0 0 0	0 0 0	75 75 0	0 0 0	

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S		%TIC	PATCHES	PO5						
FCO-JFK (CONT.)																				
9/22/76	*	BBA	344 45	370 47	199 41	FLT IN NOT	TOT CLR CLR	80 80 0	0 0 0	50 50 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 61 0	61 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
11/22/78	*	BBB	346 48	371 50	259 41	FLT IN NOT	TOT CLR CLR	75 58 17	75 58 17	48 37 11	38 30 8	1 0 1	4.3 0.0 18.8	1.1 0.0 4.8	.144E+05 .523E+02 .633E+05	85 96 46	48 38 85	16 13 26	60 43 17	15 15 0
11/23/78		BBB	334 45	371 48	200 41	FLT IN NOT	TOT CLR CLR	91 59 32	91 59 32	58 40 18	51 31 20	2 0 2	23.7 0.0 67.5	.9 0.0 2.5	.709E+05 .363E+03 .201E+C6	63 70 47	53 43 69	51 17 103	87 55 32	4 4 0
11/25/78	*	BBB	333 47	370 50	268 41	FLT IN NOT	TOT CLR CLR	74 42 32	74 42 32	49 29 20	42 23 19	2 1 1	30.5 0.0 70.6	.7 0.0 1.6	.118E+06 .444E+02 .273E+06	71 90 43	45 32 60	28 22 34	55 23 32	19 19 0
11/26/78		BBB	342 46	370 48	200 41	FLT IN NOT	TOT CLR CLR	90 54 36	90 54 36	58 33 25	50 29 21	3 0 3	17.6 0.0 44.0	.9 0.0 2.2	.555E+05 .180E+02 .139E+06	114 163 50	43 20 75	28 19 39	64 28 36	26 26 0
11/28/78	*	BBB	354 47	370 49	238 41	FLT IN NOT	TOT CLR CLR	78 58 20	78 58 20	52 38 14	47 33 14	6 3 3	15.5 0.0 60.5	.7 0.0 2.9	.568E+05 .600E+C3 .220E+06	118 152 27	46 37 68	37 20 77	51 31 20	27 27 0
11/29/78		BBB	332 53	349 59	219 41	FLT IN NOT	TOT CLR CLR	97 75 22	97 75 22	62 50 12	48 38 10	10 7 3	11.1 0.0 49.1	.5 0.0 2.2	.330E+C5 .614E+02 .145E+06	169 198 48	52 43 89	74 69 95	45 27 18	52 48 4
12/ 4/78	*	BBB	339 44	370 46	236 41	FLT IN NOT	TOT CLR CLR	71 42 29	71 42 29	47 28 19	39 23 16	12 0 12	27.3 0.0 66.9	.6 0.0 1.6	.724E+05 .779E+C1 .177E+06	147 216 45	58 30 98	37 16 68	31 2 29	40 40 0
12/17/78	*	BBB	330 46	371 48	238 41	FLT IN NOT	TOT CLR CLR	78 61 17	78 61 17	52 40 12	43 33 10	7 2 5	9.3 0.0 42.9	.9 0.0 4.2	.723E+05 .429E+01 .332E+06	123 144 51	55 44 92	38 29 66	0 0 0	0 0 0
12/18/78		BBB	340 47	371 49	201 41	FLT IN NOT	TOT CLR CLR	86 64 22	86 64 22	59 46 13	41 30 11	7 0 7	13.8 0.0 53.9	.8 0.0 3.0	.408E+05 .672E+02 .159E+06	175 207 62	54 40 91	30 26 41	0 0 0	0 0 0
12/20/78	*	BBB	289 46	291 49	236 41	FLT IN NOT	TOT CLR CLR	73 60 13	73 60 13	48 38 10	40 32 8	1 0 1	8.5 0.0 47.8	.6 0.0 3.6	.313E+05 .543E+C2 .175E+06	106 124 38	52 47 75	64 51 116	0 0 0	0 0 0
12/22/78		BBB	331 51	352 56	220 41	FLT IN NOT	TOT CLR CLR	78 58 20	78 58 20	27 15 12	44 33 11	8 0 8	14.4 0.0 56.2	.5 0.0 2.1	.625E+05 .224E+03 .243E+06	141 208 57	42 26 91	31 29 37	0 0 0	0 0 0
12/23/78	*	BBB	317 42	350 43	207 40	FLT IN NOT	TOT CLR CLR	74 64 10	74 64 10	0 0 0	40 33 7	0 0 0	7.5 0.0 55.4	.4 0.0 3.0	.387E+05 .233E+02 .286E+06	0 0 0	40 30 86	41 36 65	0 0 0	0 0 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR			THE FLIGHT	OZ	RH	H2O	TROP	STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N		
FCO-JFK (CONT.)																				
12/24/78		B5B	300 51	310 56	200 41	FLT IN NOT	TOT: CLR: CLR:	90 72 18	90 72 18	0 0 0	46 36 10	3 1 2	13.6 0.0 68.1	.3 0.0 1.6	.247E+05 .409E+02 .123E+06	0 0 0	46 35 87	108 35 372	0 0 0	0 0 0
FCO-LHR																				
9/22/76		BBA	321 47	350 51	208 43	FLT IN NOT	TOT: CLR: CLR:	16 16 0	0 0 0	9 9 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	66 66 0	0 0 0	0 0 0	0 0 0	0 0 0
FCO-SNN																				
1/27/76		BBA	387 49	390 52	353 43	FLT IN NOT	TOT: CLR: CLR:	16 16 0	0 0 0	16 16 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	354 354 0	0 0 0	0 0 0	1 1 0	15 15 0
FCO-YQX																				
1/ 7/79		BBB	328 54	370 58	240 43	FLT IN NOT	TOT: CLR: CLR:	75 69 6	0 0 0	51 47 4	42 39 3	0 0 0	2.2 0.0 27.6	.2 0.0 2.2	0. 0. 0.	184 196 37	29 28 45	19 17 44	38 32 6	37 37 0
FRA-IST																				
1/24/76 *		BBA	283 45	310 49	213 42	FLT IN NOT	TOT: CLR: CLR:	15 14 1	0 0 0	15 14 1	0 0 0	0 0 0	.1 0.0 .8	.1 0.0 1.0	0. 0. 0.	130 137 32	0 0 0	0 0 0	11 10 1	4 4 0
1/ 5/79 *		BBB	329 45	351 49	249 42	FLT IN NOT	TOT: CLR: CLR:	25 23 2	0 0 0	15 14 1	12 12 0	0 0 0	3.7 0.0 45.7	.3 0.0 3.5	0. 0. 0.	167 177 34	32 32 0	21 21 0	19 17 2	6 6 0
3/20/76 *		BBA	330 45	351 49	217 41	FLT IN NOT	TOT: CLR: CLR:	16 16 0	0 0 0	16 16 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	262 262 0	0 0 0	0 0 0	4 4 0	12 12 0
3/23/76		BBA	346 45	371 49	214 41	FLT IN NOT	TOT: CLR: CLR:	14 14 0	0 0 0	14 14 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	496 496 0	0 0 0	0 0 0	2 2 0	12 12 0
4/19/76		BBA	356 45	371 48	220 41	FLT IN NOT	TOT: CLR: CLR:	14 11 3	0 0 0	14 11 3	0 0 0	0 0 0	1.3 0.0 6.1	1.2 0.0 5.7	0. 0. 0.	360 357 370	0 0 0	0 0 0	2 2 0	12 9 3

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT						TROP	STRAT	
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
FRA-JFK																				
1/30/76	*	BBA	341 51	370 54	209 41	FLT IN NOT	TOT: CLR: CLR:	45 32 13	0 0 0	45 32 13	0 0 0	15.0 0.0 52.1	1.6 0.0 5.5	0. 0. 0.	148 184 60	0 0 0	0 0 0	24 11 13	21 21 0	
1/31/76		BBA	331 55	350 61	209 43	FLT IN NOT	TOT: CLR: CLR:	54 46 8	0 0 0	54 46 8	0 0 0	7.8 0.0 52.8	.4 0.0 2.9	0. 0. 0.	253 289 47	0 0 0	0 0 0	24 16 8	30 30 0	
1/ 9/79	*	BBB	335 50	371 52	243 41	FLT IN NOT	TOT: CLR: CLR:	64 37 27	0 0 0	18 14 4	35 18 17	4 0 4	21.1 0.0 50.1	1.0 0.0 2.3	0. 0. 0.	182 226 28	55 30 82	35 19 51	51 24 27	13 13 0
1/10/79		BBB	339 55	370 62	271 42	FLT IN NOT	TOT: CLR: CLR:	90 83 2	0 0 0	0 0 0	37 36 1	1 0 1	1.2 0.0 53.9	.1 0.0 4.5	0. 0. 0.	0 0 0	21 18 100	17 16 44	7 5 2	83 83 0
1/12/79		BBB	349 54	391 58	210 41	FLT IN NOT	TOT: CLR: CLR:	91 86 5	0 0 0	33 33 0	36 35 1	3 2 1	1.9 0.0 34.0	.2 0.0 3.2	0. 0. 0.	304 304 0	32 30 100	26 26 27	7 4 3	84 82 2
1/12/79	*	BBB	324 49	370 52	288 42	FLT IN NOT	TOT: CLR: CLR:	67 56 11	0 0 0	3 3 0	38 34 4	0 0 0	3.6 0.0 22.2	.5 0.0 3.3	0. 0. 0.	407 407 0	35 31 70	31 29 49	37 26 11	30 30 0
2/23/79		BBB	347 50	351 52	220 41	FLT IN NOT	TOT: CLR: CLR:	82 64 18	0 0 0	53 41 12	47 36 11	0 0 0	10.5 0.0 47.7	.4 0.0 1.9	0. 0. 0.	177 217 39	37 30 60	27 15 66	41 23 18	41 41 0
2/27/79	*	BBB	335 45	369 50	198 41	FLT IN NOT	TOT: CLR: CLR:	19 12 7	0 0 0	12 7 5	10 6 4	4 1 3	27.9 0.0 75.6	.3 0.0 .9	0. 0. 0.	145 214 49	69 58 86	93 112 65	19 12 7	0 0 0
2/28/79		BBB	332 46	350 50	210 41	FLT IN NOT	TOT: CLR: CLR:	89 66 23	0 0 0	58 43 15	49 35 14	6 1 5	6.1 0.0 23.7	.8 0.0 3.1	0. 0. 0.	127 154 48	51 37 84	53 40 86	67 44 23	22 22 0
3/ 1/79	*	BBB	348 50	370 53	279 41	FLT IN NOT	TOT: CLR: CLR:	58 31 27	0 0 0	37 20 17	31 17 14	7 4 3	10.7 0.0 23.0	1.3 0.0 2.7	0. 0. 0.	99 146 44	66 52 83	40 31 50	51 26 25	7 5 2
3/ 1/79		BBB	323 46	331 50	242 41	FLT IN NOT	TOT: CLR: CLR:	84 51 33	0 0 0	55 33 22	45 28 17	4 0 4	13.3 0.0 33.7	1.3 0.0 3.2	0. 0. 0.	64 73 50	58 43 83	48 34 70	82 49 33	2 2 0
3/ 3/79	*	BBB	354 49	365 52	256 41	FLT IN NOT	TOT: CLR: CLR:	58 43 15	0 0 0	34 27 7	26 21 5	0 0 0	10.9 0.0 42.3	.4 0.0 1.7	0. 0. 0.	245 294 57	27 23 44	9 9 8	21 10 11	37 33 4
3/ 4/79		BBB	337 52	370 53	238 41	FLT IN NOT	TOT: CLR: CLR:	61 40 21	0 0 0	39 25 14	33 22 11	10 0 10	18.5 0.0 53.8	.9 0.0 2.5	0. 0. 0.	168 225 66	60 41 98	22 20 26	25 16 9	36 24 12

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			ØZ	RH	H2O	TROP N	STRAT N		
						CLD	PD5	ØZ	H2O, H2S		%TIC	PATCHES	PD5							
	3/ 5/79	* BBB	352 50	370 53	189 43	FLT IN NOT	TØT: CLR: CLR:	56 31 25	0 0 0	35 18 17	30 15 15	6 0 6	12.6 0.0 28.2	1.3 0.0 2.8	0. 0. 0.	169 285 46	63 41 86	30 23 38	31 14 17	25 17 8
	3/ 5/79	BBB	345 58	371 62	221 41	FLT IN NOT	TØT: CLR: CLR:	56 39 17	0 0 0	36 25 11	31 23 8	4 1 3	18.1 0.0 59.5	.8 0.0 2.7	0. 0. 0.	256 343 57	50 37 87	16 16 18	16 5 11	39 34 5
	3/ 6/79	* BBB	343 50	377 53	280 43	FLT IN NOT	TØT: CLR: CLR:	51 30 21	0 0 0	31 18 13	21 11 10	11 3 8	17.3 0.0 42.1	1.1 0.0 2.7	0. 0. 0.	173 264 48	72 46 100	48 30 67	24 5 19	27 25 2
	3/ 6/79	BBB	356 51	383 53	200 41	FLT IN NOT	TØT: CLR: CLR:	60 44 16	0 0 0	39 29 10	31 23 8	5 3 2	10.8 0.0 40.6	.6 0.0 2.3	0. 0. 0.	264 334 62	53 43 82	85 25 256	23 11 12	37 33 4
	3/ 7/79	BBB	323 47	331 52	196 41	FLT IN NOT	TØT: CLR: CLR:	80 40 40	0 0 0	49 25 24	40 20 20	5 0 5	26.3 0.0 52.5	1.6 0.0 3.2	0. 0. 0.	102 147 55	64 43 85	95 36 154	72 32 40	8 8 0
	3/ 7/79	* BBB	351 51	371 53	193 43	FLT IN NOT	TØT: CLR: CLR:	49 22 27	0 0 0	32 14 18	26 10 16	8 0 8	36.5 0.0 66.2	.9 0.0 1.6	0. 0. 0.	102 162 54	84 81 87	43 18 58	39 12 27	10 10 0
	4/12/76	* BBA	331 50	341 52	207 41	FLT IN NOT	TØT: CLR: CLR:	45 40 5	0 0 0	45 40 5	0 0 0	0 0 0	.1 0.0 1.1	.1 0.0 1.2	0. 0. 0.	232 221 314	0 0 0	0 0 0	38 34 4	7 6 1
	4/13/76	BBA	367 52	391 55	218 42	FLT IN NOT	TØT: CLR: CLR:	54 46 8	0 0 0	54 46 8	0 0 0	0 0 0	1.6 0.0 10.6	.6 0.0 3.8	0. 0. 0.	405 432 255	0 0 0	0 0 0	10 5 5	44 41 3
	4/14/76	* BBA	334 50	371 53	209 41	FLT IN NOT	TØT: CLR: CLR:	44 44 0	0 0 0	44 44 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	252 252 0	0 0 0	0 0 0	21 21 0	23 23 0
	4/14/76	BBA	373 56	410 59	296 43	FLT IN NOT	TØT: CLR: CLR:	54 53 1	0 0 0	54 53 1	0 0 0	0 0 0	.0 0.0 2.0	.1 0.0 3.0	0. 0. 0.	468 487 553	0 0 0	0 0 0	9 9 0	45 44 1
	4/15/76	* BBA	345 50	371 53	205 41	FLT IN NOT	TØT: CLR: CLR:	45 39 6	0 0 0	45 39 6	0 0 0	0 0 0	3.8 0.0 26.4	.4 0.0 3.0	0. 0. 0.	192 198 158	0 0 0	0 0 0	35 30 5	10 9 1
	4/16/76	BBA	354 50	371 53	210 42	FLT IN NOT	TØT: CLR: CLR:	44 43 1	0 0 0	44 43 1	0 0 0	0 0 0	.0 0.0 .8	.0 0.0 2.0	0. 0. 0.	319 313 564	0 0 0	0 0 0	26 26 0	18 17 1
	4/16/76	* BBA	333 49	371 53	279 41	FLT IN NOT	TØT: CLR: CLR:	47 40 7	0 0 0	47 40 7	0 0 0	0 0 0	2.7 0.0 18.3	.2 0.0 1.3	0. 0. 0.	146 148 138	0 0 0	0 0 0	41 35 6	6 5 1

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
4/17/76	BBA	364 53	391 58	201 41	FLT TOT: IN CLR: NOT CLR:	55 39 16	0 0 0	55 39 16	0 0 0	0 0 0	5.1 0.0 17.6	1.0 0.0 3.3	0. 0. 0.	347 425 157	0 0 0	0 0 0	29 14 15	26 25 1
5/23/79	BDB	335 53	373 56	219 41	FLT TOT: IN CLR: NOT CLR:	84 62 22	84 62 22	52 38 14	37 27 10	8 2 6	8.3 0.0 31.6	1.5 0.0 5.6	.134E+06 .610E+03 .510E+06	316 394 102	44 25 95	47 34 84	40 18 22	44 44 0
5/23/79 *	BDB	342 49	370 51	212 41	FLT TOT: IN CLR: NOT CLR:	72 49 23	72 49 23	48 32 16	40 25 15	10 1 9	5.1 0.0 15.9	1.3 0.0 4.0	.708E+05 .150E+04 .218E+06	286 394 69	51 29 88	78 63 102	37 15 22	35 34 1
9/14/76	BBA	355 53	390 56	226 41	FLT TOT: IN CLR: NOT CLR:	77 77 0	0 0 0	50 50 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	99 99 0	0 0 0	0 0 0	52 52 0	25 25 0
9/14/76 *	BBA	347 52	369 56	248 42	FLT TOT: IN CLR: NOT CLR:	72 72 0	0 0 0	45 45 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	103 103 0	0 0 0	0 0 0	58 58 0	14 14 0
9/18/76 *	BBA	342 50	369 52	244 41	FLT TOT: IN CLR: NOT CLR:	65 62 3	0 0 0	43 40 3	0 0 0	0 0 0	.1 0.0 1.7	.2 0.0 3.3	0. 0. 0.	92 87 152	0 0 0	0 0 0	49 48 1	16 14 2
9/18/76	BBA	327 54	370 60	252 42	FLT TOT: IN CLR: NOT CLR:	76 74 2	0 0 0	50 49 1	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.	69 69 75	0 0 0	0 0 0	76 74 2	0 0 0
9/18/76 *	BBA	336 49	369 52	203 41	FLT TOT: IN CLR: NOT CLR:	72 72 0	0 0 0	47 47 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	91 91 0	0 0 0	0 0 0	55 55 0	17 17 0
9/19/76	BBA	370 54	390 58	240 42	FLT TOT: IN CLR: NOT CLR:	76 76 0	0 0 0	49 49 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	101 101 0	0 0 0	0 0 0	40 40 0	36 36 0
9/25/76 *	BBA	348 50	370 52	245 41	FLT TOT: IN CLR: NOT CLR:	71 71 0	0 0 0	44 44 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	69 69 0	0 0 0	0 0 0	0 0 0	0 0 0
9/25/76 *	BBA	337 50	369 52	248 41	FLT TOT: IN CLR: NOT CLR:	73 73 0	0 0 0	48 48 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	62 62 0	0 0 0	0 0 0	0 0 0	0 0 0
9/25/76	BBA	342 50	371 54	204 41	FLT TOT: IN CLR: NOT CLR:	84 84 0	0 0 0	56 56 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	55 55 0	0 0 0	0 0 0	0 0 0	0 0 0
9/26/76	BBA	334 51	350 54	240 42	FLT TOT: IN CLR: NOT CLR:	81 81 0	0 0 0	52 52 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	71 71 0	0 0 0	0 0 0	0 0 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		PD5		QZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES										
FRA-JFK (CONT.)																						
10/ 1/78	*	BBB	343 51	351 54	197 42	FLT IN NOT	TOT: CLR: CLR:	67 38 29	67 38 29	43 26 17	0 0 0	22.1 0.0 51.0	1.4 0.0 3.2	.639E+05 .254E+03 .147E+06	85 81 91	0 0 0	0 0 0	67 38 29			0 0 0	
10/ 2/78	*	BBB	341 50	370 54	233 41	FLT IN NOT	TOT: CLR: CLR:	69 55 14	69 55 14	47 36 11	0 0 0	8.7 0.0 43.1	.8 0.0 4.1	.277E+05 .231E+03 .135E+06	98 101 89	0 0 0	0 0 0	69 55 14			0 0 0	
10/ 2/78		BBB	344 47	371 50	192 41	FLT IN NOT	TOT: CLR: CLR:	85 57 28	85 57 28	57 39 18	0 0 0	8.2 0.0 25.0	.7 0.0 2.1	.224E+05 .494E+02 .680E+05	76 83 59	0 0 0	0 0 0	85 57 28			0 0 0	
10/ 3/78		BBB	326 46	350 50	199 41	FLT IN NOT	TOT: CLR: CLR:	83 46 37	83 46 37	52 28 24	0 0 0	17.6 0.0 39.4	1.3 0.0 3.0	.475E+05 .392E+03 .106E+06	72 84 59	0 0 0	0 0 0	83 46 37			0 0 0	
10/ 4/78		BBB	359 47	371 52	220 41	FLT IN NOT	TOT: CLR: CLR:	32 17 15	32 17 15	21 10 11	0 0 0	14.3 0.0 30.5	1.4 0.0 3.1	.279E+05 .145E+03 .594E+05	105 140 73	0 0 0	0 0 0	22 7 15			10 10 0	
10/ 4/78	*	BBB	335 50	371 54	202 42	FLT IN NOT	TOT: CLR: CLR:	34 20 14	34 20 14	21 15 6	0 0 0	5.7 0.0 13.8	1.1 0.0 2.7	.180E+05 .562E+02 .436E+05	104 125 51	0 0 0	0 0 0	25 12 13			9 8 1	
10/ 5/78		BBB	347 50	371 52	246 42	FLT IN NOT	TOT: CLR: CLR:	79 46 33	79 46 33	49 28 21	0 0 0	11.9 0.0 28.6	1.0 0.0 2.5	.516E+05 .478E+02 .123E+06	93 122 54	0 0 0	0 0 0	67 34 33			12 12 0	
10/ 5/78	*	BBB	331 53	371 57	211 42	FLT IN NOT	TOT: CLR: CLR:	65 36 29	65 36 29	41 22 19	0 0 0	18.2 0.0 40.8	1.5 0.0 3.3	.446E+05 .327E+02 .999E+05	79 102 52	0 0 0	0 0 0	57 28 29			8 8 0	
11/24/78		BBB	351 53	391 57	220 41	FLT IN NOT	TOT: CLR: CLR:	90 64 26	90 64 26	61 43 18	5 37 14	19.2 0.0 66.4	1.0 0.0 3.5	.920E+05 .918E+02 .318E+06	150 190 52	42 29 78	21 22 18	34 13 21			56 51 5	
11/24/78	*	BBB	348 49	361 52	272 41	FLT IN NOT	TOT: CLR: CLR:	66 42 24	66 42 24	42 26 16	28 17 11	22.9 0.0 62.9	1.0 0.0 2.8	.827E+05 .262E+03 .227E+06	76 92 50	58 44 81	16 16 16	53 29 24			13 13 0	
11/27/78		BBB	319 51	349 54	209 41	FLT IN NOT	TOT: CLR: CLR:	87 66 21	87 66 21	54 39 15	49 36 13	11.1 0.0 45.8	.6 0.0 2.5	.263E+05 .798E+01 .109E+06	112 139 41	38 29 64	43 31 78	70 49 21			17 17 0	
11/27/78	*	BBB	331 51	361 55	241 41	FLT IN NOT	TOT: CLR: CLR:	70 54 16	70 54 16	44 34 10	36 26 10	7.9 0.0 34.7	.5 0.0 2.3	.229E+05 .267E+02 .100E+06	102 121 36	37 28 60	30 30 29	61 45 16			9 9 0	
11/30/78	*	BBB	334 48	370 51	290 42	FLT IN NOT	TOT: CLR: CLR:	65 34 31	65 34 31	44 24 20	40 22 18	31.0 0.0 65.1	1.3 0.0 2.8	.110E+06 .135E+02 .230E+06	91 135 37	59 33 90	54 22 93	40 9 31			25 25 0	

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TRCP				STRAT		
						CLD	PD5	QZ	H2O, H2S		%TIC	PATCHES	PD5	QZ	RH	H2O	N	N		
FRA-JFK (CONT.)																				
12/	1/78	BBB	333 52	390 56	240 42	FLT IN NOT	TOT CLR CLR	85 77 8	85 77 8	55 49 6	47 43 4	2 2 0	5.4 0.0 57.9	.4 0.0 4.1	.288E+05 .494E+02 .306E+06	204 222 49	26 23 63	25 20 81	48 40 8	37 37 0
12/	1/78 *	BBB	346 47	370 51	262 41	FLT IN NOT	TOT CLR CLR	63 42 21	63 42 21	42 27 15	34 22 12	5 0 5	22.2 0.0 66.5	.7 0.0 2.2	.746E+05 .178E+03 .223E+06	111 144 51	53 35 85	57 19 126	37 17 20	26 25 1
FRA-KHI																				
5/11/79 *	BDB	329 38	352 50	217 26	FLT IN NOT	TOT CLR CLR	79 78 1	79 78 1	0 0 0	39 38 1	0 0 0	.1 0.0 9.8	.0 0.0 1.0	.206E+04 .193E+04 .123E+05	0 0 0	39 37 84	44 45 27	79 78 1	0 0 0	
6/	4/79 *	BDB	308 38	311 50	223 26	FLT IN NOT	TOT CLR CLR	76 57 19	76 57 19	47 36 11	41 32 9	0 0 0	3.2 0.0 12.8	.8 0.0 3.2	.583E+05 .319E+04 .224E+06	90 92 82	49 42 77	112 102 150	76 57 19	0 0 0
FRA-LHR																				
1/20/77	DDA	240 51	240 52	240 50	FLT IN NOT	TOT CLR CLR	6 0 6	6 0 6	3 0 3	0 0 0	0 0 0	59.2 0.0 59.2	6.7 0.0 6.7	.342E+06 0. .342E+06	31 0 31	0 0 0	0 0 0	6 0 6	0 0 0	
1/	5/79	BBB	292 51	310 52	240 50	FLT IN NOT	TOT CLR CLR	6 5 1	0 0 0	3 3 0	0 0 0	0 0 0	2.0 0.0 11.8	.3 0.0 2.0	0. 0. 0.	95 95 0	0 0 0	0 0 0	6 5 1	0 0 0
2/14/77	DDA	240 51	240 52	240 50	FLT IN NOT	TOT CLR CLR	6 6 0	6 6 0	3 3 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.261E+03 .261E+03 0.	53 53 0	0 0 0	0 0 0	6 6 0	0 0 0	
2/14/79	BBB	286 51	310 52	212 50	FLT IN NOT	TOT CLR CLR	7 5 2	0 0 0	3 2 1	3 2 1	0 0 0	1.7 0.0 6.1	.9 0.0 3.0	0. 0. 0.	115 103 140	49 36 76	33 24 50	2 1 1	5 4 1	
2/16/79 *	BBB	268 51	270 51	259 50	FLT IN NOT	TOT CLR CLR	6 5 1	0 0 0	3 2 1	3 2 1	0 0 0	.1 0.0 .4	.2 0.0 1.0	0. 0. 0.	57 59 55	38 38 39	35 35 35	6 5 1	0 0 0	
3/15/79	BBB	322 51	351 52	224 51	FLT IN NOT	TOT CLR CLR	5 4 1	0 0 0	3 2 1	0 0 0	0 0 0	10.5 0.0 52.5	.8 0.0 4.0	0. 0. 0.	167 222 58	0 0 0	0 0 0	0 0 0	0 0 0	
5/12/79	BDB	303 51	311 52	268 50	FLT IN NOT	TOT CLR CLR	6 6 0	6 6 0	0 0 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.114E+04 .114E+04 0.	0 0 0	42 42 0	66 66 0	6 6 0	0 0 0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES										
FRA-LHR (CONT.)																						
5/24/79	*	BDB	276 51	291 51	201 50	FLT	TOT:	6	6	3	1	1	40.1	4.7	.859E+06	78	100	177	6	0		
						IN	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
						NOT	CLR:	6	6	3	1	1	40.1	4.7	.859E+06	78	100	177	6	0		
6/ 5/79		BDB	291 51	310 52	215 51	FLT	TOT:	5	5	3	3	0	0.0	0.0	.226E+04	94	54	95	5	0		
						IN	CLR:	5	5	3	3	0	0.0	0.0	.226E+04	94	54	95	5	0		
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
9/ 7/76		BBA	352 51	390 52	280 50	FLT	TOT:	6	0	2	0	0	.1	.2	0.	62	0	0	6	0		
						IN	CLR:	5	0	2	0	0	0.0	0.0	0.	62	0	0	5	0		
						NOT	CLR:	1	0	0	0	0	.4	1.0	0.	0	0	0	1	0		
10/ 9/77		BCB	303 51	311 52	286 50	FLT	TOT:	5	5	0	0	0	5.1	0.0	.218E+05	0	0	0	5	0		
						IN	CLR:	2	2	0	0	0	0.0	0.0	0.	0	0	0	2	0		
						NOT	CLR:	3	3	0	0	0	8.5	0.0	.364E+05	0	0	0	3	0		
10/11/77	*	BCB	277 52	290 52	228 52	FLT	TOT:	5	5	0	0	0	5.8	0.0	.323E+05	0	0	0	5	0		
						IN	CLR:	1	1	0	0	0	0.0	0.0	0.	0	0	0	1	0		
						NOT	CLR:	4	4	0	0	0	7.3	0.0	.404E+05	0	0	0	4	0		
10/16/78		BBB	274 51	281 51	241 50	FLT	TOT:	6	6	0	0	0	50.9	1.8	.177E+06	0	0	0	6	0		
						IN	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
						NOT	CLR:	6	6	0	0	0	50.9	1.8	.177E+06	0	0	0	6	0		
10/30/78		BBB	294 51	310 52	240 50	FLT	TOT:	7	7	3	3	0	0.0	0.0	.187E+02	41	45	65	7	0		
						IN	CLR:	7	7	3	3	0	0.0	0.0	.187E+02	41	45	65	7	0		
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
11/22/76		DDA	241 51	241 52	241 50	FLT	TOT:	6	0	0	0	0	.4	.3	0.	0	0	0	6	0		
						IN	CLR:	5	0	0	0	0	0.0	0.0	0.	0	0	0	5	0		
						NOT	CLR:	1	0	0	0	0	2.4	2.0	0.	0	0	0	1	0		
11/29/76		DDA	240 51	240 52	238 50	FLT	TOT:	7	0	0	0	0	51.5	2.0	0.	0	0	0	7	0		
						IN	CLR:	2	0	0	0	0	0.0	0.0	0.	0	0	0	2	0		
						NOT	CLR:	5	0	0	0	0	72.1	2.8	0.	0	0	0	5	0		
11/ 2/78	*	BBB	281 51	290 51	257 50	FLT	TOT:	5	5	2	3	0	0.0	0.0	0.	41	42	79	5	0		
						IN	CLR:	5	5	2	3	0	0.0	0.0	0.	41	42	79	5	0		
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
12/29/76	*	DDA	230 51	230 51	230 50	FLT	TOT:	5	0	0	0	0	0.0	0.0	0.	0	0	0	5	0		
						IN	CLR:	5	0	0	0	0	0.0	0.0	0.	0	0	0	5	0		
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
12/ 7/78	*	BBB	267 51	271 51	252 50	FLT	TOT:	6	6	3	4	1	0.0	0.0	.555E+02	41	68	131	6	0		
						IN	CLR:	6	6	3	4	1	0.0	0.0	.555E+02	41	68	131	6	0		
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
12/26/78	*	BBB	274 51	291 51	209 50	FLT	TOT:	5	5	0	2	0	64.8	1.2	.158E+06	0	67	56	0	0		
						IN	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0		
						NOT	CLR:	5	5	0	2	0	64.8	1.2	.158E+06	0	67	56	0	0		

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF CBS						AVERAGES FOR THE FLIGHT			TROP			STRAT	
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
FRA-THR																			
5/30/79	BDB	358 41	370 48	276 36	FLT IN NOT	TOT: CLR: CLR:	49 40 9	49 40 9	24 19 5	19 16 3	0 0 0	5.6 0.0 30.4	.9 0.0 5.1	.241E+06 .901E+03 .131E+07	226 239 177	37 36 43	20 21 16	39 36 3	10 4 6
9/ 7/76 *	BBA	341 42	350 50	198 36	FLT IN NOT	TOT: CLR: CLR:	54 54 0	0 0 0	33 33 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	79 79 0	0 0 0	0 0 0	54 54 0	0 0 0
10/ 9/77 *	BCB	334 42	391 50	217 37	FLT IN NOT	TOT: CLR: CLR:	49 41 8	49 41 8	0 0 0	0 0 0	0 0 0	5.5 0.0 33.4	0.0 0.0 0.0	.201E+05 .863E+03 .119E+06	0 0 0	0 0 0	0 0 0	28 20 8	21 21 0
10/11/77	BCB	299 42	332 48	290 36	FLT IN NOT	TOT: CLR: CLR:	44 29 15	44 29 15	0 0 0	0 0 0	0 0 0	9.4 0.0 27.5	0.0 0.0 0.0	.340E+05 .499E+02 .997E+05	0 0 0	0 0 0	0 0 0	44 29 15	0 0 0
10/16/78 *	BBB	344 42	350 49	251 36	FLT IN NOT	TOT: CLR: CLR:	47 38 9	47 38 9	28 24 4	0 0 0	0 0 0	5.6 0.0 29.1	.7 0.0 3.7	.220E+05 .974E+03 .111E+06	68 70 59	0 0 0	0 0 0	47 38 9	0 0 0
10/30/78 *	BBB	279 42	280 49	250 36	FLT IN NOT	TOT: CLR: CLR:	41 29 12	41 29 12	25 18 7	22 18 4	3 1 2	11.5 0.0 39.3	1.0 0.0 3.3	.543E+05 .180E+02 .186E+06	56 52 65	62 55 93	125 125 122	41 29 12	0 0 0
11/23/77	BCB	352 41	370 48	266 36	FLT IN NOT	TOT: CLR: CLR:	41 41 0	41 41 0	25 25 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.105E+02 .105E+02 0.	126 126 0	0 0 0	0 0 0	29 29 0	12 12 0
11/24/77 *	BCB	368 41	391 49	251 36	FLT IN NOT	TOT: CLR: CLR:	57 56 1	57 56 1	36 35 1	0 0 0	0 0 0	.5 0.0 26.3	0.0 0.0 0.0	.135E+02 .113E+02 .137E+03	130 134 0	0 0 0	0 0 0	27 26 1	30 30 0
11/ 2/78	BBB	328 42	331 49	260 37	FLT IN NOT	TOT: CLR: CLR:	45 39 6	45 39 6	22 19 3	25 23 2	1 0 1	3.2 0.0 23.8	.4 0.0 2.8	.601E+04 .506E+01 .451E+05	75 77 63	51 48 88	34 31 69	38 32 6	7 7 0
12/ 7/78	BBB	278 42	291 49	229 36	FLT IN NOT	TOT: CLR: CLR:	44 29 15	44 29 15	30 19 11	22 15 7	5 1 4	16.9 0.0 49.5	1.2 0.0 3.5	.120E+06 .787E+02 .351E+06	52 55 46	64 50 93	97 54 189	44 29 15	0 0 0
12/26/78	BBB	320 41	330 49	218 36	FLT IN NOT	TOT: CLR: CLR:	42 35 7	42 35 7	0 0 0	21 18 3	1 1 0	2.8 0.0 16.6	.6 0.0 3.6	.386E+05 .486E+02 .231E+06	0 0 0	47 45 55	32 25 72	0 0 0	0 0 0
GIG-JFK																			
4/10/76	BBA	325 7	350 39	204 -21	FLT IN NOT	TOT: CLR: CLR:	55 43 12	0 0 0	55 43 12	0 0 0	0 0 0	7.6 0.0 34.7	.9 0.0 4.0	0. 0. 0.	73 81 46	0 0 0	0 0 0	29 26 3	2 1 1

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5						
GIG-JFK (CONT.)																		
4/ 9/77	*	AAA	365 8	370 39	196 -22	FLT IN NOT	TOT CLR: CLR:	97 67 30	0 0 0	0 0 0	0 0 0	10.9 0.0 35.2	.8 0.0 2.5	0. 0. 0.	0 0 0	0 0 0	92 62 30	5 5 0
4/10/77		AAA	388 9	390 39	260 -21	FLT IN NOT	TOT CLR: CLR:	99 76 23	0 0 0	0 0 0	0 0 0	7.6 0.0 32.5	.7 0.0 2.9	0. 0. 0.	0 0 0	0 0 0	89 66 23	10 10 0
4/16/77	*	AAA	368 9	371 39	291 -20	FLT IN NOT	TOT CLR: CLR:	94 62 32	0 0 0	0 0 0	0 0 0	5.8 0.0 17.0	.7 0.0 1.9	0. 0. 0.	0 0 0	0 0 0	86 54 32	8 8 0
4/17/77		AAA	388 9	430 40	235 -21	FLT IN NOT	TOT CLR: CLR:	101 63 38	0 0 0	0 0 0	0 0 0	13.6 0.0 36.2	.9 0.0 2.3	0. 0. 0.	0 0 0	0 0 0	81 43 38	20 20 0
4/23/77	*	AAA	381 9	410 39	271 -21	FLT IN NOT	TOT CLR: CLR:	93 65 28	0 0 0	0 0 0	0 0 0	14.5 0.0 48.2	.9 0.0 3.0	0. 0. 0.	0 0 0	0 0 0	93 65 28	0 0 0
4/24/77		AAA	394 8	410 39	257 -21	FLT IN NOT	TOT CLR: CLR:	99 47 52	0 0 0	0 0 0	0 0 0	23.7 0.0 45.1	1.0 0.0 1.9	0. 0. 0.	0 0 0	0 0 0	99 47 52	0 0 0
GIG-PTY																		
9/ 4/76		BBA	364 -6	390 7	266 -21	FLT IN NOT	TOT CLR: CLR:	66 66 0	0 0 0	33 33 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	46 46 0	0 0 0	66 66 0	0 0 0
GUA-LAX																		
4/ 7/76	*	BBA	332 23	371 33	203 15	FLT IN NOT	TOT CLR: CLR:	25 17 8	0 0 0	25 17 8	0 0 0	8.9 0.0 27.8	.7 0.0 2.1	0. 0. 0.	55 60 45	0 0 0	25 17 8	0 0 0
4/23/76	*	BBA	341 24	371 33	207 15	FLT IN NOT	TOT CLR: CLR:	24 17 7	0 0 0	24 17 7	0 0 0	18.8 0.0 64.4	1.3 0.0 4.6	0. 0. 0.	85 99 51	0 0 0	24 17 7	0 0 0
4/26/76		BBA	379 24	390 33	211 15	FLT IN NOT	TOT CLR: CLR:	31 29 2	0 0 0	31 29 2	0 0 0	.3 0.0 4.7	.2 0.0 2.5	0. 0. 0.	99 99 106	0 0 0	31 29 2	0 0 0
5/ 1/76	*	BBA	337 23	371 33	208 15	FLT IN NOT	TOT CLR: CLR:	41 36 5	0 0 0	27 24 3	0 0 0	1.7 0.0 13.6	.1 0.0 1.2	0. 0. 0.	98 105 46	0 0 0	41 36 5	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES									
GUA-LAX (CONT.)																					
5/19/79	*	BDB	360 24	371 32	190 15	FLT IN NOT	TOT: CLR: CLR:	43 29 14	43 29 14	27 17 10	23 17 6	5 2 3	6.2 0.0 19.1	1.5 0.0 4.5	.103E+06 .295E+03 .316E+06	95 123 47	63 54 88	84 73 118	43 29 14	0 0 0	
5/20/79		BDB	363 24	392 33	215 16	FLT IN NOT	TOT: CLR: CLR:	46 41 5	46 41 5	29 26 3	23 21 2	0 0 0	.3 0.0 2.6	.2 0.0 1.6	.213E+04 .127E+03 .185E+05	133 142 52	40 39 48	65 66 54	39 34 5	7 7 0	
9/ 1/76	*	BBA	324 23	331 32	210 15	FLT IN NOT	TOT: CLR: CLR:	38 38 0	0 0 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	57 57 0	0 0 0	0 0 0	38 38 0	0 0 0	
9/ 4/76		BBA	367 24	390 33	296 15	FLT IN NOT	TOT: CLR: CLR:	43 43 0	0 0 0	28 28 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	59 59 0	0 0 0	0 0 0	43 43 0	0 0 0	
GUA-PTY																					
9/ 4/76	*	BBA	333 12	350 14	256 9	FLT IN NOT	TOT: CLR: CLR:	15 15 0	0 0 0	10 10 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	44 44 0	0 0 0	0 0 0	15 15 0	0 0 0	
GUA-SJO																					
5/19/79		BDB	315 12	330 13	263 11	FLT IN NOT	TOT: CLR: CLR:	7 7 0	7 7 0	2 2 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.430E+02 .430E+02 0.	38 38 0	0 0 0	0 0 0	7 7 0	0 0 0	
5/20/79	*	BDB	325 13	350 14	261 12	FLT IN NOT	TOT: CLR: CLR:	8 8 0	8 8 0	4 4 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.438E+02 .438E+02 0.	32 32 0	0 0 0	0 0 0	8 8 0	0 0 0	
GUM-HNL																					
2/ 3/76	*	BBA	347 16	351 21	210 13	FLT IN NOT	TOT: CLR: CLR:	54 53 1	0 0 0	54 53 1	0 0 0	0 0 0	1.1 0.0 60.4	.0 0.0 1.0	0. 0. 0.	21 21 22	0 0 0	0 0 0	54 53 1	0 0 0	
3/28/76	*	BBA	344 16	351 20	296 13	FLT IN NOT	TOT: CLR: CLR:	52 51 1	0 0 0	52 51 1	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.	70 71 27	0 0 0	0 0 0	52 51 1	0 0 0	
3/29/76		BBA	353 19	390 21	261 14	FLT IN NOT	TOT: CLR: CLR:	36 30 6	0 0 0	36 30 6	0 0 0	0 0 0	.1 0.0 .4	.2 0.0 1.0	0. 0. 0.	52 53 48	0 0 0	0 0 0	36 30 6	0 0 0	
4/27/76	*	BBA	344 20	351 23	207 14	FLT IN NOT	TOT: CLR: CLR:	50 44 6	0 0 0	50 44 6	0 0 0	0 0 0	6.8 0.0 56.4	.3 0.0 2.7	0. 0. 0.	34 88 52	0 0 0	0 0 0	50 44 6	0 0 0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N		
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
GUM-HNL (CONT.)																				
5/ 9/79	*	BDB	369 19	390 22	270 14	FLT IN NOT	TOT CLR CLR	86 57 29	86 57 29	0 0 0	43 28 15	7 0 7	5.8 0.0 17.1	1.3 0.0 3.9	.800E+05 .222E+04 .233E+06	0 0 0	56 38 89	89 53 156	86 57 29	0 0 0
5/10/79		BDB	366 18	370 21	255 14	FLT IN NOT	TOT CLR CLR	68 46 22	68 46 22	0 0 0	35 20 15	10 1 9	8.4 0.0 26.0	1.1 0.0 3.3	.178E+06 .517E+04 .539E+06	0 0 0	64 39 97	97 72 130	68 46 22	0 0 0
5/15/79	*	BDB	376 18	390 21	267 14	FLT IN NOT	TOT CLR CLR	78 75 3	78 75 3	0 0 0	38 37 1	0 0 0	.1 0.0 1.4	.1 0.0 1.3	.190E+04 .826E+03 .289E+05	0 0 0	38 38 29	35 36 25	78 75 3	0 0 0
5/16/79		BDB	377 18	391 21	252 14	FLT IN NOT	TOT CLR CLR	75 74 1	75 74 1	0 0 0	40 40 0	0 0 0	.2 0.0 16.5	.0 0.0 3.0	.233E+04 .266E+03 .155E+06	0 0 0	38 38 0	34 34 0	75 74 1	0 0 0
5/17/79	*	BDB	343 19	351 21	264 14	FLT IN NOT	TOT CLR CLR	75 75 0	75 75 0	48 48 0	39 39 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.332E+03 .332E+03 0.	77 77 0	29 29 0	61 61 0	75 75 0	0 0 0
5/18/79		BDB	330 17	370 21	277 13	FLT IN NOT	TOT CLR CLR	75 64 11	75 64 11	45 41 4	38 33 5	4 1 3	3.6 0.0 24.6	.6 0.0 4.0	.667E+05 .139E+04 .447E+06	60 60 59	49 42 97	164 141 319	75 64 11	0 0 0
12/28/78	*	BBB	334 18	351 21	261 14	FLT IN NOT	TOT CLR CLR	83 83 0	83 83 0	52 52 0	47 47 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.450E+01 .450E+01 0.	49 49 0	15 15 0	60 60 0	0 0 0	0 0 0
12/29/78		BBB	324 19	370 21	229 14	FLT IN NOT	TOT CLR CLR	68 59 9	68 59 9	45 39 6	29 24 5	3 0 3	4.8 0.0 36.2	.9 0.0 6.8	.118E+05 .837E+01 .891E+05	73 76 54	26 15 75	140 81 423	0 0 0	0 0 0
12/30/78	*	BBB	350 19	370 22	254 14	FLT IN NOT	TOT CLR CLR	73 73 0	73 73 0	47 47 0	41 41 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.778E+01 .778E+01 0.	61 61 0	16 16 0	47 47 0	0 0 0	0 0 0
12/31/78		BBB	367 23	370 27	287 15	FLT IN NOT	TOT CLR CLR	72 72 0	72 72 0	48 48 0	43 43 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.134E+02 .134E+02 0.	45 45 0	20 20 0	69 69 0	19 19 0	0 0 0
GUM-MNL																				
2/ 3/76		BBA	368 14	390 15	209 14	FLT IN NOT	TOT CLR CLR	21 15 6	0 0 0	21 15 6	0 0 0	0 0 0	2.0 0.0 7.1	.6 0.0 2.0	0. 0. 0.	7 7 6	0 0 0	0 0 0	21 15 6	0 0 0
2/ 4/76	*	BBA	358 14	371 15	211 14	FLT IN NOT	TOT CLR CLR	17 13 4	0 0 0	17 13 4	0 0 0	0 0 0	7.0 0.0 29.7	1.0 0.0 4.3	0. 0. 0.	5 5 6	0 0 0	0 0 0	17 13 4	0 0 0

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			TROP			STRAT		
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
GUM-MNL (CONT.)																			
3/28/76	BBA	346 14	350 15	298 14	FLT TOT:	14	0	14	0	0		.2	.3	0.	24	0	0	14	0
					IN CLR:	10	0	10	0	0	0.0	0.0	0.	24	0	0	10	0	
					NOT CLR:	4	0	4	0	0	.7	1.0	0.	26	0	0	4	0	
5/17/79	BDB	308 14	311 15	272 14	FLT TOT:	28	28	18	15	1	4.3	.3	.170E+05	44	34	301	23	0	
					IN CLR:	25	25	17	13	0	0.0	0.0	.235E+04	45	28	227	25	0	
					NOT CLR:	3	3	1	2	1	40.0	3.0	.139E+06	30	69	785	3	0	
5/18/79 *	BDB	357 14	370 15	234 14	FLT TOT:	31	31	18	17	0	.5	.1	.298E+04	38	37	106	31	0	
					IN CLR:	28	28	16	15	0	0.0	0.0	.105E+04	38	35	102	28	0	
					NOT CLR:	3	3	2	2	0	5.2	1.3	.210E+C5	31	54	133	3	0	
12/28/78	BBB	327 14	330 15	282 14	FLT TOT:	29	29	18	16	0	.5	.2	.594E+03	26	29	115	0	0	
					IN CLR:	28	28	18	16	0	0.0	0.0	.400E+02	26	29	115	0	0	
					NOT CLR:	1	1	0	0	0	15.7	6.0	.161E+05	0	0	0	0	0	
12/29/78 *	BBB	351 14	370 15	210 14	FLT TOT:	28	28	9	13	0	5.6	.5	.187E+05	29	46	66	0	0	
					IN CLR:	22	22	9	9	0	0.0	0.0	.627E+03	29	27	39	0	0	
					NOT CLR:	6	6	0	4	0	26.1	2.3	.851E+05	0	87	125	0	0	
GUM-NRT																			
5/10/79 *	BDB	367 25	370 34	328 15	FLT TOT:	29	29	0	13	0	3.0	.4	.231E+05	0	47	72	29	0	
					IN CLR:	25	25	0	13	0	0.0	0.0	.945E+03	0	47	72	25	0	
					NOT CLR:	4	4	0	0	0	21.7	3.0	.161E+06	0	0	0	4	0	
5/10/79	BDB	381 25	390 35	218 16	FLT TOT:	31	31	0	14	0	.4	.2	.618E+04	0	65	56	31	0	
					IN CLR:	29	29	0	14	0	0.0	0.0	.247E+03	0	65	56	29	0	
					NOT CLR:	2	2	0	0	0	6.3	2.5	.921E+05	0	0	0	2	0	
5/15/79	BDB	386 25	391 34	308 15	FLT TOT:	31	31	0	14	4	6.3	1.6	.111E+06	0	82	72	31	0	
					IN CLR:	17	17	0	10	0	0.0	0.0	.102E+03	0	74	59	17	0	
					NOT CLR:	14	14	0	4	4	13.9	3.6	.246E+06	0	100	104	14	0	
5/16/79 *	BDB	368 25	371 34	328 15	FLT TOT:	30	30	0	15	8	29.7	2.2	.283E+06	0	77	156	30	0	
					IN CLR:	12	12	0	7	0	0.0	0.0	.238E+03	0	50	73	12	0	
					NOT CLR:	18	18	0	8	8	49.4	3.6	.472E+06	0	100	229	18	0	
12/31/78 *	BBB	358 24	371 35	196 14	FLT TOT:	31	31	19	16	0	0.0	0.0	.302E+02	38	24	40	0	0	
					IN CLR:	31	31	19	16	0	0.0	0.0	.302E+02	38	24	40	0	0	
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
12/31/78	BBB	378 25	390 34	231 15	FLT TOT:	31	31	19	11	0	.1	.0	.106E+02	53	25	24	0	0	
					IN CLR:	30	30	18	11	0	0.0	0.0	.109E+02	54	25	24	0	0	
					NOT CLR:	1	1	1	0	0	2.0	1.0	0.	38	0	0	0	0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR			THE FLIGHT			TROP			STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
HKG-HND																					
1/23/76	*	BBA	307 27	311 34	219 22	FLT IN NOT	TOT: CLR: CLR:	30 30 0	0 0 0	30 30 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	18 18 0	0 0 0	0 0 0	30 30 0	0 0 0		
3/19/76	*	BBA	308 27	311 34	221 22	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	28 28 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	72 72 0	0 0 0	0 0 0	28 28 0	0 0 0		
3/25/76		BBA	351 28	371 35	213 21	FLT IN NOT	TOT: CLR: CLR:	22 22 0	0 0 0	22 22 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	98 98 0	0 0 0	0 0 0	20 20 0	2 2 0		
4/21/76		BBA	360 29	371 35	213 22	FLT IN NOT	TOT: CLR: CLR:	19 8 11	0 0 0	19 8 11	0 0 0	26.6 0.0 46.0	1.2 0.0 2.1	0. 0. 0.	70 64 75	0 0 0	0 0 0	19 8 11	0 0 0		
9/ 6/76	*	BBA	381 28	390 34	264 22	FLT IN NOT	TOT: CLR: CLR:	32 27 5	0 0 0	19 16 3	0 0 0	2.5 0.0 16.2	.3 0.0 1.8	0. 0. 0.	64 62 74	0 0 0	0 0 0	32 27 5	0 0 0		
10/ 8/77	*	BCB	345 28	351 34	250 22	FLT IN NOT	TOT: CLR: CLR:	37 35 2	37 35 2	0 0 0	0 0 0	.3 0.0 6.3	0.0 0.0 0.0	.511E+01 .541E+01 0.	0 0 0	0 0 0	0 0 0	37 35 2	0 0 0		
10/13/77		BCB	361 29	371 35	212 22	FLT IN NOT	TOT: CLR: CLR:	28 26 2	28 26 2	0 0 0	0 0 0	.8 0.0 10.6	0.0 0.0 0.0	.130E+04 .265E+02 .178E+05	0 0 0	0 0 0	0 0 0	28 26 2	0 0 0		
HKG-MNL																					
1/ 1/77	*	DDA	341 19	350 21	283 16	FLT IN NOT	TOT: CLR: CLR:	11 10 1	0 0 0	0 0 0	0 0 0	.5 0.0 5.5	.2 0.0 2.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	11 10 1	0 0 0		
1/ 1/77		DDA	318 19	330 21	257 17	FLT IN NOT	TOT: CLR: CLR:	8 6 2	0 0 0	0 0 0	0 0 0	3.8 0.0 15.3	1.1 0.0 4.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	8 6 2	0 0 0		
1/ 4/77		DDA	321 19	330 21	263 16	FLT IN NOT	TOT: CLR: CLR:	10 8 2	0 0 0	0 0 0	0 0 0	1.3 0.0 6.5	.2 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	10 8 2	0 0 0		
1/ 4/77	*	DDA	334 19	350 21	252 16	FLT IN NOT	TOT: CLR: CLR:	12 12 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	12 12 0	0 0 0		
2/ 3/76	*	BBA	298 19	391 21	219 16	FLT IN NOT	TOT: CLR: CLR:	5 5 0	0 0 0	5 5 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	29 29 0	0 0 0	0 0 0	5 5 0	0 0 0		

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS							AVERAGES FOR THE FLIGHT			OZ			RH		H2O	TROP N	STRAT N					
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	TROP N	STRAT N										
HKG-MNL (CONT.)																											
2/ 4/76	BBA	259 18	341 22	210 16	FLT TOT:	6	0	6	0	0	0.0	0.0	0.	33	0	0	6	0	0	0							
					IN CLR:	6	0	6	0	0	0.0	0.0	0.								33	0	0	6	0	0	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.														
3/28/76 *	BBA	381 19	391 21	340 17	FLT TOT:	8	0	8	0	0	.3	.6	0.	27	0	0	8	0	0	0							
					IN CLR:	6	0	6	0	0	0.0	0.0	0.								28	0	0	6	0	0	0
					NOT CLR:	2	0	2	0	0	1.4	2.5	0.														
3/29/76	BBA	355 18	371 21	293 16	FLT TOT:	7	0	7	0	0	.1	.1	0.	33	0	0	7	0	0	0							
					IN CLR:	6	0	6	0	0	0.0	0.0	0.								29	0	0	6	0	0	0
					NOT CLR:	1	0	1	0	0	.4	1.0	0.														
8/17/76	DDA	317 18	330 21	263 16	FLT TOT:	11	0	7	0	0	9.1	1.6	0.	31	0	0	11	0	0	0							
					IN CLR:	6	0	3	0	0	0.0	0.0	0.								29	0	0	6	0	0	0
					NOT CLR:	5	0	4	0	0	20.0	3.6	0.														
8/17/76 *	DDA	343 19	351 21	289 16	FLT TOT:	12	0	8	0	0	28.9	1.5	0.	20	0	0	12	0	0	0							
					IN CLR:	5	0	5	0	0	0.0	0.0	0.								22	0	0	5	0	0	0
					NOT CLR:	7	0	3	0	0	49.5	2.6	0.														
HKG-NRT																											
1/ 4/79 *	BBB	306 29	310 34	187 22	FLT TOT:	41	0	27	20	1	0.0	0.0	0.	51	25	52	41	0	0	0							
					IN CLR:	41	0	27	20	1	0.0	0.0	0.								51	25	52	41	0	0	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.														
2/13/79 *	BBB	346 28	351 34	228 22	FLT TOT:	49	0	29	25	2	8.6	.6	0.	44	53	152	49	0	0	0							
					IN CLR:	38	0	24	21	0	0.0	0.0	0.								42	45	74	38	0	0	0
					NOT CLR:	11	0	5	4	2	38.5	2.5	0.														
2/17/79	BBB	354 28	370 34	245 22	FLT TOT:	31	0	19	11	0	0.0	0.0	0.	151	16	55	20	11	0	0							
					IN CLR:	31	0	19	11	0	0.0	0.0	0.								151	16	55	20	11	0	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.														
2/22/79 *	BBB	347 28	351 34	251 22	FLT TOT:	41	0	26	21	0	5.9	.2	0.	58	21	35	41	0	0	0							
					IN CLR:	35	0	24	21	0	0.0	0.0	0.								57	21	35	35	0	0	0
					NOT CLR:	6	0	2	0	0	40.5	1.7	0.														
3/14/79 *	BBB	372 28	391 34	231 22	FLT TOT:	46	0	30	23	0	.1	0.0	0.	18	26	37	46	0	0	0							
					IN CLR:	45	0	30	23	0	0.0	0.0	0.								18	26	37	45	0	0	0
					NOT CLR:	1	0	0	0	0	6.3	0.0	0.														
5/11/79 *	BDB	341 29	350 34	274 22	FLT TOT:	44	44	0	24	7	13.0	1.0	.107E+06	0	67	137	44	0	0	0							
					IN CLR:	24	24	0	15	1	0.0	0.0	.104E+05								0	50	114	24	0	0	0
					NOT CLR:	20	20	0	9	6	28.6	2.2	.223E+06														
5/25/79	BDB	363 28	370 35	223 22	FLT TOT:	34	34	20	16	0	0.0	0.0	.996E+02	140	30	74	34	0	0	0							
					IN CLR:	34	34	20	16	0	0.0	0.0	.996E+02								140	30	74	34	0	0	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.														

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT					TRCP	STRAT
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N

# HKG-NRT (CONT.)

5/31/79	BDB	361 29	370 35	258 22	FLT IN NOT	TOT: CLR: CLR:	37 37 0	37 37 0	24 18 0	18 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.118E+05 .118E+05 0.	122 122 0	38 38 0	89 89 0	30 30 0	7 7 0
6/ 4/79 *	BDB	370 29	391 34	271 22	FLT IN NOT	TOT: CLR: CLR:	38 18 20	38 18 20	25 12 13	22 10 12	4 2 2	10.6 0.0 20.1	2.1 0.0 3.9	.158E+06 .111E+05 .290E+06	105 121 90	73 56 88	89 95 84	38 18 20	0 0 0
10/15/78 *	BBB	346 29	350 35	253 22	FLT IN NOT	TOT: CLR: CLR:	35 29 6	35 29 6	23 20 3	0 0 0	0 0 0	10.4 0.0 60.6	.6 0.0 3.3	.475E+05 .304E+03 .276E+06	40 39 43	0 0 0	0 0 0	35 29 6	0 0 0
10/29/78 *	BBB	335 27	351 34	243 22	FLT IN NOT	TOT: CLR: CLR:	40 38 2	40 38 2	26 25 1	20 19 1	0 0 0	2.0 0.0 39.2	.2 0.0 4.0	.544E+04 .833E+01 .109E+06	30 30 34	53 53 44	190 175 483	40 38 2	0 0 0
11/ 3/78	BBB	326 28	330 34	260 22	FLT IN NOT	TOT: CLR: CLR:	32 32 0	32 32 0	20 20 0	17 17 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.992E+01 .992E+01 0.	61 61 0	34 34 0	114 114 0	32 32 0	0 0 0
12/ 8/78	BBB	352 29	370 35	252 22	FLT IN NOT	TOT: CLR: CLR:	31 31 0	31 31 0	19 19 0	13 13 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.188E+02 .188E+02 0.	66 66 0	36 36 0	21 21 0	31 31 0	0 0 0
12/27/78	BBB	354 29	370 34	261 22	FLT IN NOT	TOT: CLR: CLR:	31 31 0	31 31 0	0 0 0	13 13 0	2 2 0	0.0 0.0 0.0	0.0 0.0 0.0	.143E+02 .143E+02 0.	0 0 0	31 31 0	139 139 0	0 0 0	0 0 0

APPENDIX B

# HKG-SFO

1/18/78 *	ABB	381 43	430 55	187 22	FLT IN NOT	TOT: CLR: CLR:	162 160 2	162 160 2	0 0 0	85 85 0	13 13 0	.3 0.0 27.8	.0 0.0 4.0	.548E+04 .206E+03 .428E+06	0 0 0	45 45 0	65 65 0	52 50 2	110 110 0
1/20/78 *	ABB	421 25	430 28	254 22	FLT IN NOT	TOT: CLR: CLR:	19 19 0	19 19 0	0 0 0	9 9 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.289E+02 .289E+02 0.	0 0 0	85 85 0	54 54 0	19 19 0	0 0 0
1/20/78	ABB	379 34	391 38	265 22	FLT IN NOT	TOT: CLR: CLR:	117 117 0	117 117 0	0 0 0	67 67 0	9 9 0	0.0 0.0 0.0	0.0 0.0 0.0	.602E+01 .602E+01 0.	0 0 0	64 64 0	76 76 0	75 75 0	42 42 0
1/27/78	ABB	392 35	411 38	335 32	FLT IN NOT	TOT: CLR: CLR:	79 77 2	79 77 2	52 51 1	46 45 1	0 0 0	.2 0.0 7.5	.0 0.0 1.5	.351E+01 .320E+01 .153E+02	158 160 57	46 46 33	48 48 61	56 54 2	23 23 0
1/27/78 *	ABB	388 39	410 54	369 22	FLT IN NOT	TOT: CLR: CLR:	102 102 0	102 102 0	67 67 0	58 58 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.395E+01 .395E+01 0.	315 315 0	36 36 0	45 45 0	43 43 0	59 59 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		TROP		STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HKG-SFO (CONT.)																		
1/29/78	ABB	399 38	410 38	208 38	FLT TOT:	20	20	11	10	1	0.0	0.0	.159E+01	283	71	44	1	19
					IN CLR:	20	20	11	10	1	0.0	0.0	.159E+01	283	71	44	1	19
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
2/ 5/78 *	ABB	389 43	430 55	201 22	FLT TOT:	136	136	89	77	21	0.0	0.0	.866E+02	320	65	37	41	95
					IN CLR:	136	136	89	77	21	0.0	0.0	.866E+02	320	65	37	41	95
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/24/78 *	ABB	390 44	410 58	217 22	FLT TOT:	141	141	91	40	6	.0	.0	.155E+02	398	40	35	56	85
					IN CLR:	140	140	91	40	6	0.0	0.0	.905E+01	398	40	35	55	85
					NOT CLR:	1	1	0	0	0	.4	1.0	.918E+03	0	0	0	1	0
5/26/78	ABB	368 38	390 45	312 22	FLT TOT:	116	116	70	0	0	0.0	0.0	.827E+01	245	0	0	92	24
					IN CLR:	116	116	70	0	0	0.0	0.0	.827E+01	245	0	0	92	24
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/26/78 *	ABB	377 43	430 55	266 22	FLT TOT:	153	153	101	0	0	.0	.0	.343E+01	263	0	0	90	63
					IN CLR:	152	152	100	0	0	0.0	0.0	.345E+01	265	0	0	89	63
					NOT CLR:	1	1	1	0	0	.4	1.0	0.	57	0	0	1	0
5/28/78	ABB	375 39	391 44	256 22	FLT TOT:	130	130	84	0	0	0.0	0.0	.826E+01	158	0	0	110	20
					IN CLR:	130	130	84	0	0	0.0	0.0	.826E+01	158	0	0	110	20
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/29/78 *	ABB	371 43	411 55	213 22	FLT TOT:	148	148	95	45	24	0.0	0.0	.820E+01	204	88	45	115	33
					IN CLR:	148	148	95	45	24	0.0	0.0	.820E+01	204	88	45	115	33
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/30/78	ABB	374 39	410 45	259 22	FLT TOT:	131	130	86	10	0	0.0	0.0	.657E+01	188	54	216	104	27
					IN CLR:	131	130	86	10	0	0.0	0.0	.657E+01	188	54	216	104	27
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
HKG-SIN																		
1/20/78 *	ABB	399 11	411 21	200 3	FLT TOT:	32	32	0	2	0	1.7	.6	.406E+03	0	45	225	32	0
					IN CLR:	28	28	0	2	0	0.0	0.0	.118E+03	0	45	225	28	0
					NOT CLR:	4	4	0	0	0	13.8	4.5	.242E+04	0	0	0	4	0
1/27/78 *	ABB	403 11	410 21	295 3	FLT TOT:	32	32	0	16	15	6.3	.9	.816E+04	0	95	74	32	0
					IN CLR:	22	22	0	13	12	0.0	0.0	.186E+03	0	94	73	22	0
					NOT CLR:	10	10	0	3	3	20.0	2.9	.257E+05	0	100	79	10	0
5/27/78	ABB	422 12	432 21	271 3	FLT TOT:	31	31	18	0	0	0.0	0.0	.145E+01	49	0	0	31	0
					IN CLR:	31	31	18	0	0	0.0	0.0	.145E+01	49	0	0	31	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/28/78 *	ABB	397 12	411 21	246 3	FLT TOT:	33	33	21	0	0	0.0	0.0	.465E+01	41	0	0	33	0
					IN CLR:	33	33	21	0	0	0.0	0.0	.465E+01	41	0	0	33	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	02	RH	H20	TROP	STRAT
						CLD	PD5	02	H20	H2S	%TIC	PATCHES	PD5				N	N
HKG-SIN (CONT.)																		
5/29/78	ABB	426	431	321	FLT TOT:	25	25	16	13	7	0.0	0.0	.256E+01	42	93	23	25	0
		11	21	4	IN CLR:	25	25	16	13	7	0.0	0.0	.256E+01	42	93	23	25	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/30/78	* ABB	405	411	276	FLT TOT:	27	27	17	7	3	0.0	0.0	.394E+01	57	58	189	27	0
		13	21	6	IN CLR:	27	27	17	7	3	0.0	0.0	.394E+01	57	58	189	27	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
HND-JFK																		
1/21/77	* AAA	381	410	277	FLT TOT:	148	148	94	123	0	.3	.0	.351E+03	472	24	14	14	134
		54	65	37	IN CLR:	145	145	93	122	0	0.0	0.0	.861E+00	475	23	14	11	134
					NOT CLR:	3	3	1	1	0	13.1	1.7	.173E+05	183	65	27	3	0
1/23/77	AAA	388	410	269	FLT TOT:	129	129	83	106	0	.1	.0	.337E+01	490	13	14	4	125
		51	60	36	IN CLR:	128	128	83	105	0	0.0	0.0	.340E+01	490	12	13	3	125
					NOT CLR:	1	1	0	1	0	18.8	3.0	0.	0	26	39	1	0
1/28/77	* AAA	382	430	206	FLT TOT:	134	134	0	113	0	0.0	0.0	.768E+01	0	18	17	15	119
		54	62	37	IN CLR:	134	134	0	113	0	0.0	0.0	.768E+01	0	18	17	15	119
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
1/ 8/78	* ABB	381	411	334	FLT TOT:	136	136	0	0	0	.3	.0	.109E+02	0	0	0	4	132
		56	65	37	IN CLR:	134	134	0	0	0	0.0	0.0	.627E+01	0	0	0	2	132
					NOT CLR:	2	2	0	0	0	21.8	1.5	.321E+03	0	0	0	2	0
1/10/78	ABB	373	391	238	FLT TOT:	132	132	0	0	0	1.1	.0	.290E+03	0	0	0	13	119
		54	65	36	IN CLR:	129	129	0	0	0	0.0	0.0	.872E+01	0	0	0	12	117
					NOT CLR:	3	3	0	0	0	47.1	2.0	.124E+05	0	0	0	1	2
1/13/78	ABB	407	410	364	FLT TOT:	23	23	0	10	0	.1	.0	.139E+01	0	51	46	1	22
		49	55	42	IN CLR:	22	22	0	10	0	0.0	0.0	.145E+01	0	51	46	0	22
					NOT CLR:	1	1	0	0	0	1.6	1.0	0.	0	0	0	1	0
1/16/78	ABB	391	430	249	FLT TOT:	122	122	0	70	2	2.3	.1	.158E+05	0	28	36	11	111
		51	60	36	IN CLR:	118	118	0	69	1	0.0	0.0	.818E+01	0	27	36	7	111
					NOT CLR:	4	4	0	1	1	69.7	3.8	.481E+06	0	100	35	4	0
1/17/78	* ABB	379	410	270	FLT TOT:	147	147	0	82	7	3.9	.2	.125E+05	0	43	44	3	144
		53	62	37	IN CLR:	139	139	0	82	7	0.0	0.0	.556E+02	0	43	44	0	139
					NOT CLR:	8	8	0	0	0	72.5	3.0	.229E+06	0	0	0	3	5
2/11/78	ABB	403	410	195	FLT TOT:	41	41	27	23	0	0.0	0.0	.383E+01	428	53	63	1	40
		46	47	41	IN CLR:	41	41	27	23	0	0.0	0.0	.333E+01	428	53	63	1	40
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
3/26/77	AAA	352	370	261	FLT TOT:	54	54	35	45	4	3.9	.4	.544E+04	213	61	21	0	0
		46	50	41	IN CLR:	45	45	28	37	1	0.0	0.0	.258E+03	224	54	18	0	0
					NOT CLR:	9	9	7	8	3	23.3	2.7	.313E+05	168	93	33	0	0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5						
HND-JFK (CONT.)																		
4/ 6/77 *	AAA	391 55	430 65	278 37	FLT IN NOT	TOT: CLR: CLR:	151 150 1	0 0 0	0 0 0	0 0 0	0 0 2.7	0 0 1.0	0 0 0.	0 0 0	0 0 0	0 0 0	3 2 1	148 148 0
4/ 8/77	AAA	376 52	410 60	206 36	FLT IN NOT	TOT: CLR: CLR:	131 125 6	0 0 0	0 0 0	0 0 0	1.1 0.0 24.4	.1 0.0 2.0	0 0 0.	0 0 0	0 0 0	0 0 0	31 25 6	100 100 0
4/10/77 *	AAA	348 53	351 64	216 36	FLT IN NOT	TOT: CLR: CLR:	144 133 11	0 0 0	0 0 0	0 0 0	2.6 0.0 33.4	.2 0.0 2.3	0 0 0.	0 0 0	0 0 0	0 0 0	35 24 11	109 109 0
4/12/77	AAA	347 46	370 51	265 36	FLT IN NOT	TOT: CLR: CLR:	127 102 25	0 0 0	0 0 0	0 0 0	7.8 0.0 39.7	.5 0.0 2.8	0 0 0.	0 0 0	0 0 0	0 0 0	74 49 25	53 53 0
4/13/77 *	AAA	386 54	431 65	264 37	FLT IN NOT	TOT: CLR: CLR:	147 136 11	0 0 0	0 0 0	0 0 0	.9 0.0 11.5	.2 0.0 2.5	0 0 0.	0 0 0	0 0 0	0 0 0	46 35 11	101 101 0
4/15/77	AAA	377 52	410 60	270 36	FLT IN NOT	TOT: CLR: CLR:	130 101 29	0 0 0	0 0 0	0 0 0	6.7 0.0 29.9	.5 0.0 2.2	0 0 0.	0 0 0	0 0 0	0 0 0	40 12 28	90 89 1
4/17/77 *	AAA	383 53	431 64	281 37	FLT IN NOT	TOT: CLR: CLR:	153 142 11	0 0 0	0 0 0	0 0 0	3.8 0.0 53.2	.2 0.0 3.5	0 0 0.	0 0 0	0 0 0	0 0 0	41 30 11	112 112 0
4/19/77	AAA	374 51	390 59	278 37	FLT IN NOT	TOT: CLR: CLR:	126 93 33	0 0 0	0 0 0	0 0 0	13.1 0.0 49.9	1.0 0.0 3.7	0 0 0.	0 0 0	0 0 0	0 0 0	57 34 23	69 59 10
4/20/77 *	AAA	378 53	411 61	276 37	FLT IN NOT	TOT: CLR: CLR:	124 115 9	0 0 0	0 0 0	0 0 0	1.9 0.0 26.5	.2 0.0 2.1	0 0 0.	0 0 0	0 0 0	0 0 0	29 21 8	95 94 1
4/22/77	AAA	368 50	390 59	200 36	FLT IN NOT	TOT: CLR: CLR:	135 113 22	0 0 0	0 0 0	0 0 0	4.4 0.0 27.1	.3 0.0 1.6	0 0 0.	0 0 0	0 0 0	0 0 0	44 29 15	91 84 7
4/24/77 *	AAA	371 52	390 61	205 37	FLT IN NOT	TOT: CLR: CLR:	151 129 22	0 0 0	0 0 0	0 0 0	6.5 0.0 44.8	.4 0.0 2.6	0 0 0.	0 0 0	0 0 0	0 0 0	63 41 22	88 88 0
4/25/77	AAA	383 53	410 63	243 36	FLT IN NOT	TOT: CLR: CLR:	134 113 21	0 0 0	0 0 0	0 0 0	6.1 0.0 39.1	.4 0.0 2.5	0 0 0.	0 0 0	0 0 0	0 0 0	20 10 10	114 103 11
4/26/77 *	AAA	358 51	370 59	279 37	FLT IN NOT	TOT: CLR: CLR:	145 128 17	145 128 17	92 83 9	0 0 0	3.7 0.0 31.6	.3 0.0 2.6	.104E+05 .175E+04 .755E+05	345 373 87	0 0 0	0 0 0	87 70 17	58 56 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT					TROP	STRAT	
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HND-JFK (CONT.)																		
4/28/77	AAA	361 52	410 59	200 37	FLT TOT: IN CLR: NOT CLR:	128 111 17	128 111 17	84 74 10	0 0 0	5.8 0.0 43.9	.3 0.0 2.2	.340E+05 .701E+02 .256E+06	521 578 99	0 0 0	0 0 0	28 12 16	100 99 1	
4/29/77	* AAA	374 53	410 63	218 37	FLT TOT: IN CLR: NOT CLR:	148 148 0	148 148 0	96 96 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.679E+03 .679E+03 0.	527 527 0	0 0 0	0 0 0	36 36 0	112 112 0	
4/ 9/78	ABB	379 48	391 59	217 35	FLT TOT: IN CLR: NOT CLR:	81 73 8	81 73 8	0 0 0	41 35 6	20 14 6	6.8 0.0 68.4	.1 0.0 .9	.185E+05 .351E+03 .184E+06	0 0 0	73 68 100	50 54 28	29 22 7	52 51 1
4/28/78	* ABB	370 54	390 65	255 37	FLT TOT: IN CLR: NOT CLR:	145 132 13	145 132 13	0 0 0	74 66 8	27 22 5	3.0 0.0 33.6	.3 0.0 2.8	.263E+05 .925E+03 .283E+06	0 0 0	76 73 97	39 38 45	45 34 11	100 98 2
4/30/78	ABB	370 54	390 65	260 36	FLT TOT: IN CLR: NOT CLR:	134 128 6	134 128 6	0 0 0	71 70 1	14 13 1	1.1 0.0 24.3	.1 0.0 1.3	.322E+04 .106E+04 .492E+05	0 0 0	59 58 100	46 45 119	32 26 6	102 102 0
5/ 1/77	AAA	387 50	410 59	252 35	FLT TOT: IN CLR: NOT CLR:	130 123 7	130 123 7	79 79 0	0 0 0	0 0 26.0	.1 0.0 2.4	.522E+04 .460E+02 .961E+05	614 614 0	0 0 0	0 0 0	14 7 7	116 116 0	
5/ 1/78	* ABB	382 54	431 65	264 37	FLT TOT: IN CLR: NOT CLR:	146 145 1	146 145 1	0 0 0	82 81 1	18 17 1	.1 0.0 13.7	.0 0.0 1.0	.362E+03 .316E+03 .703E+04	0 0 0	54 53 100	34 34 33	35 34 1	111 111 0
5/ 3/78	ABB	377 46	411 49	264 35	FLT TOT: IN CLR: NOT CLR:	124 101 23	124 101 23	0 0 0	71 60 11	22 12 10	9.6 0.0 52.0	.4 0.0 2.0	.198E+05 .804E+03 .103E+06	0 0 0	68 62 100	47 45 60	35 21 14	89 80 9
5/ 4/78	* ABB	378 54	431 65	199 36	FLT TOT: IN CLR: NOT CLR:	141 128 13	141 128 13	0 0 0	79 74 5	13 12 1	4.0 0.0 43.8	.2 0.0 2.0	.697E+04 .286E+03 .728E+05	0 0 0	68 68 65	60 58 100	32 22 10	109 106 3
5/ 6/78	ABB	379 51	410 60	261 35	FLT TOT: IN CLR: NOT CLR:	136 126 10	136 126 10	0 0 0	76 71 5	16 12 4	1.5 0.0 20.4	.1 0.0 1.9	.285E+04 .108E+03 .375E+05	0 0 0	53 56 97	47 41 135	28 18 10	108 108 0
5/ 7/78	* ABB	365 41	389 45	256 37	FLT TOT: IN CLR: NOT CLR:	19 5 14	19 5 14	0 0 0	10 5 5	9 5 4	32.0 0.0 43.4	1.8 0.0 2.5	.921E+05 .343E+04 .124E+06	0 0 0	93 100 86	65 41 89	18 5 13	1 0 1
5/19/78	* ABB	387 53	432 61	312 37	FLT TOT: IN CLR: NOT CLR:	144 144 0	144 144 0	87 87 0	70 70 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.111E+02 .111E+02 0.	474 474 0	36 36 0	29 29 0	33 33 0	111 111 0
6/ 1/77	* AAA	388 53	430 65	349 37	FLT TOT: IN CLR: NOT CLR:	46 43 3	0 0 0	16 15 1	0 0 0	0 0 0	1.2 0.0 18.3	.2 0.0 2.3	0. 0. 0.	375 396 52	0 0 0	0 0 0	16 13 3	30 30 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR			THE FLIGHT		TROP			STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N		
HND-JFK (CONT.)																				
6/ 2/77	AAA	382 46	410 50	345 37	FLT TOT: IN CLR: NOT CLR:	29 26 3	0 0 0	13 12 1	0 0 0	0 0 0	1.5 0.0 14.5	.1 0.0 1.3	0. 0. 0.	321 341 76	0 0 0	0 0 0	6 3 3	23 23 0		
6/ 3/77 *	AAA	391 50	430 50	205 35	FLT TOT: IN CLR: NOT CLR:	149 134 15	149 134 15	98 87 11	0 0 0	0 0 0	3.6 0.0 36.2	.4 0.0 3.7	.502E+04 .297E+03 .473E+05	276 300 88	0 0 0	0 0 0	55 46 9	94 88 6		
7/ 4/77 *	ACA	395 55	430 65	256 37	FLT TOT: IN CLR: NOT CLR:	139 139 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	52 52 0	87 87 0		
7/ 6/77	ACA	384 47	411 51	279 36	FLT TOT: IN CLR: NOT CLR:	120 94 26	0 0 0	0 0 0	0 0 0	0 0 0	7.5 0.0 34.4	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	89 64 25	31 30 1		
7/ 8/77 *	ACA	376 55	410 65	248 37	FLT TOT: IN CLR: NOT CLR:	135 128 7	135 128 7	86 82 4	0 0 0	0 0 0	.8 0.0 16.1	0.0 0.0 0.0	.156E+04 .947E+02 .283E+05	381 394 107	0 0 0	0 0 0	42 36 6	93 92 1		
7/10/77	ACA	378 51	410 60	218 36	FLT TOT: IN CLR: NOT CLR:	133 105 28	133 105 28	85 71 14	0 0 0	0 0 0	6.9 0.0 32.5	0.0 0.0 0.0	.310E+05 .478E+03 .145E+06	310 357 73	0 0 0	0 0 0	59 35 24	74 70 4		
7/14/77 *	ACA	350 54	370 65	205 36	FLT TOT: IN CLR: NOT CLR:	85 78 7	85 78 7	54 50 4	0 0 0	0 0 0	3.3 0.0 40.5	0.0 0.0 0.0	.727E+04 .207E+03 .860E+05	298 315 83	0 0 0	0 0 0	39 32 7	46 46 0		
7/15/77	ACA	376 47	411 51	260 35	FLT TOT: IN CLR: NOT CLR:	111 80 31	111 80 31	76 54 22	0 0 0	0 0 0	8.8 0.0 31.5	0.0 0.0 0.0	.511E+05 .205E+03 .182E+06	171 207 82	0 0 0	0 0 0	90 60 30	21 20 1		
7/17/77 *	ACA	380 55	432 66	217 37	FLT TOT: IN CLR: NOT CLR:	143 130 13	143 130 13	88 78 10	0 0 0	0 0 0	1.8 0.0 20.2	0.0 0.0 0.0	.884E+04 .199E+03 .953E+05	321 350 90	0 0 0	0 0 0	62 49 13	81 81 0		
7/19/77	ACA	381 47	410 53	211 35	FLT TOT: IN CLR: NOT CLR:	124 89 35	124 89 35	80 58 22	0 0 0	0 0 0	4.3 0.0 15.2	0.0 0.0 0.0	.256E+05 .997E+03 .881E+05	231 272 124	0 0 0	0 0 0	79 45 34	45 44 1		
7/28/77 *	ACA	397 53	431 63	289 37	FLT TOT: IN CLR: NOT CLR:	118 109 9	118 109 9	71 67 4	0 0 0	0 0 0	1.7 0.0 21.7	0.0 0.0 0.0	.497E+04 .177E+03 .630E+05	277 287 118	0 0 0	0 0 0	51 45 6	67 64 3		
8/16/77 *	ABA	379 54	431 65	225 37	FLT TOT: IN CLR: NOT CLR:	138 112 26	138 112 26	86 72 14	0 0 0	0 0 0	7.3 0.0 38.9	.6 0.0 2.9	.319E+05 .572E+03 .167E+06	172 195 54	0 0 0	0 0 0	58 32 26	80 80 0		
8/18/77	ABA	383 54	411 67	313 37	FLT TOT: IN CLR: NOT CLR:	98 89 9	98 89 9	49 48 1	0 0 0	0 0 0	2.2 0.0 24.2	.3 0.0 3.0	.280E+05 .396E+02 .305E+06	246 249 104	0 0 0	0 0 0	32 23 9	66 66 0		

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR		THE FLIGHT		QZ	RH	H2O	TROP	STRAT
								CLD	PD5	QZ	H2O	H2S	%TIC	PATCHES	PD5				N	N
8/19/77	*	ABA	381 54	430 63	275 37	FLT IN NOT	TOT: CLR: CLR:	148 139 9	148 139 9	79 75 4	0 0 0	0 0 0	.2 0.0 3.2	.1 0.0 1.6	.583E+03 .741E+02 .844E+04	208 214 93	0 0 0	0 0 0	65 57 8	83 82 1
8/21/77		ABA	380 54	411 67	258 36	FLT IN NOT	TOT: CLR: CLR:	123 106 17	123 106 17	54 51 3	0 0 0	0 0 0	6.0 0.0 43.6	.3 0.0 1.9	.111E+05 .342E+03 .783E+05	259 270 72	0 0 0	0 0 0	56 39 17	67 67 0
8/25/77	*	ABA	381 53	430 65	243 37	FLT IN NOT	TOT: CLR: CLR:	141 120 21	141 120 21	93 82 11	0 0 0	0 0 0	3.3 0.0 21.9	.5 0.0 3.2	.140E+05 .184E+03 .928E+05	178 196 45	0 0 0	0 0 0	64 45 19	77 75 2
8/27/77		ABA	363 44	411 50	237 35	FLT IN NOT	TOT: CLR: CLR:	106 89 17	106 89 17	67 56 11	0 0 0	0 0 0	5.2 0.0 32.4	.7 0.0 4.4	.173E+05 .106E+03 .107E+06	117 128 59	0 0 0	0 0 0	89 72 17	17 17 0
8/28/77	*	ABA	385 52	430 60	258 37	FLT IN NOT	TOT: CLR: CLR:	140 135 5	140 135 5	92 88 4	0 0 0	0 0 0	.5 0.0 15.0	.1 0.0 2.6	.167E+04 .145E+03 .430E+05	223 230 81	0 0 0	0 0 0	41 36 5	99 99 0
8/30/77		ABA	396 45	430 50	266 36	FLT IN NOT	TOT: CLR: CLR:	115 97 18	115 97 18	73 61 12	0 0 0	0 0 0	6.4 0.0 41.0	.7 0.0 4.3	.316E+05 .663E+02 .202E+06	149 164 73	0 0 0	0 0 0	74 56 18	41 41 0
8/31/77	*	ABA	389 55	430 65	271 37	FLT IN NOT	TOT: CLR: CLR:	137 127 10	137 127 10	92 87 5	0 0 0	0 0 0	3.2 0.0 44.0	.2 0.0 2.8	.120E+05 .630E+02 .164E+06	237 247 54	0 0 0	0 0 0	42 32 10	95 95 0
9/ 2/77		ABA	377 46	410 51	215 35	FLT IN NOT	TOT: CLR: CLR:	129 107 22	129 107 22	84 70 14	0 0 0	0 0 0	3.8 0.0 22.3	.7 0.0 3.9	.107E+05 .866E+02 .624E+05	181 204 66	0 0 0	0 0 0	83 61 22	46 46 0
9/ 6/77	*	ABA	388 54	431 65	235 37	FLT IN NOT	TOT: CLR: CLR:	152 148 4	152 148 4	99 95 4	0 0 0	0 0 0	.6 0.0 22.1	.1 0.0 4.3	.163E+04 .113E+03 .577E+05	202 208 74	0 0 0	0 0 0	78 74 4	74 74 0
9/ 8/77		ABA	383 51	431 59	198 36	FLT IN NOT	TOT: CLR: CLR:	117 99 18	117 99 18	77 67 10	0 0 0	0 0 0	4.6 0.0 30.0	.6 0.0 3.6	.340E+05 .183E+03 .220E+06	199 218 73	0 0 0	0 0 0	50 37 13	67 62 5
9/10/77	*	ABA	379 55	430 65	267 37	FLT IN NOT	TOT: CLR: CLR:	143 126 17	143 126 17	93 80 13	0 0 0	0 0 0	2.0 0.0 16.5	.3 0.0 2.2	.474E+04 .682E+03 .349E+05	163 185 26	0 0 0	0 0 0	80 63 17	63 63 0
9/12/77		ABA	384 52	410 60	204 36	FLT IN NOT	TOT: CLR: CLR:	121 101 20	121 101 20	74 59 15	0 0 0	0 0 0	5.7 0.0 34.7	.5 0.0 2.9	.151E+05 .755E+02 .909E+05	150 179 39	0 0 0	0 0 0	59 39 20	62 62 0
9/13/77	*	ABA	389 55	430 67	277 37	FLT IN NOT	TOT: CLR: CLR:	150 145 5	150 145 5	98 94 4	0 0 0	0 0 0	.6 0.0 18.4	.1 0.0 4.2	.209E+04 .676E+02 .609E+05	238 245 88	0 0 0	0 0 0	30 25 5	120 120 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		TROP		STRAT
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N

HND-JFK (CONT.)

9/15/77	ABA	382 53	410 62	273 36	FLT IN NOT	TOT CLR CLR	118 99 19	118 99 19	79 66 13	0 0 0	0 0 0	4.4 0.0 27.6	.5 0.0 2.8	.176E+05 .125E+03 .110E+06	166 186 54	0 0 0	0 0 0	57 38 19	61 61 0
9/16/77	* ABA	377 50	410 60	216 35	FLT IN NOT	TOT CLR CLR	145 118 27	145 118 27	96 76 20	0 0 0	0 0 0	7.1 0.0 37.9	.6 0.0 3.1	.171E+05 .545E+02 .915E+05	100 110 62	0 0 0	0 0 0	122 95 27	23 23 0
9/20/77	* ABA	391 53	430 65	245 35	FLT IN NOT	TOT CLR CLR	148 138 10	148 138 10	101 93 8	0 0 0	0 0 0	.8 0.0 12.2	.1 0.0 1.6	.126E+04 .381E+03 .133E+05	169 180 47	0 0 0	0 0 0	65 75 10	63 63 0
9/23/77	* ABA	377 54	411 63	270 37	FLT IN NOT	TOT CLR CLR	149 137 12	0 0 0	97 88 9	0 0 0	0 0 0	1.9 0.0 23.3	.3 0.0 4.1	0. 0. 0.	167 178 58	0 0 0	0 0 0	70 60 10	79 77 2
9/25/77	ABA	358 45	410 52	198 35	FLT IN NOT	TOT CLR CLR	132 126 6	0 0 0	87 84 3	0 0 0	0 0 0	1.4 0.0 30.7	.1 0.0 3.0	0. 0. 0.	138 142 40	0 0 0	0 0 0	74 69 5	58 57 1
10/ 3/77	* ABA	382 54	430 65	209 37	FLT IN NOT	TOT CLR CLR	132 127 5	0 0 0	80 77 3	0 0 0	0 0 0	.2 0.0 4.9	.2 0.0 4.6	0. 0. 0.	208 207 226	0 0 0	0 0 0	43 41 2	89 86 3
10/17/77	* ABB	388 54	431 65	190 37	FLT IN NOT	TOT CLR CLR	145 145 0	0 0 0	95 95 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	261 261 0	0 0 0	0 0 0	18 18 0	127 127 0
10/20/77	ABB	384 47	410 51	309 36	FLT IN NOT	TOT CLR CLR	116 115 1	0 0 0	75 75 0	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.	180 180 0	0 0 0	0 0 0	47 46 1	69 69 0
10/31/77	* ABB	381 54	410 65	250 36	FLT IN NOT	TOT CLR CLR	138 125 13	138 125 13	89 81 8	22 21 1	1 1 0	4.0 0.0 43.0	.3 0.0 3.5	.201E+05 .701E+02 .213E+06	183 197 39	47 44 100	89 43 042	37 24 13	101 101 0
11/ 2/77	ABB	374 51	411 59	223 37	FLT IN NOT	TOT CLR CLR	121 117 4	121 117 4	79 76 3	0 0 0	0 0 0	1.1 0.0 33.3	.1 0.0 1.8	.198E+04 .843E+02 .573E+05	183 187 83	0 0 0	0 0 0	51 47 4	70 70 0

HND-LAX

1/22/77	AAA	407 37	430 39	217 35	FLT IN NOT	TOT CLR CLR	94 94 0	94 94 0	61 61 0	78 78 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.537E+01 .537E+01 0.	413 413 0	13 13 0	16 16 0	2 2 0	92 92 0
1/22/77	* AAA	388 47	410 55	209 35	FLT IN NOT	TOT CLR CLR	116 110 6	116 110 6	77 73 4	97 92 5	3 1 2	2.3 0.0 45.3	.2 0.0 3.2	.781E+04 .444E+02 .150E+06	550 576 75	27 24 94	15 15 13	9 9 0	107 101 6

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PCS	OZ	H2O	H2S	%TIC	PATCHES	PD5						
HND-LAX (CONT.)																			
1/29/77	AAA	401 38	430 40	201 34	FLT IN NOT	TOT: CLR: CLR:	100 99 1	100 99 1	59 58 1	84 83 1	0 0 0	.0 0.0 .4	.0 0.0 1.0	.210E+02 .212E+02 0.	381 383 253	15 15 14	18 18 17	15 15 0	85 84 1
1/ 9/78	ABB	400 36	430 37	295 35	FLT IN NOT	TOT: CLR: CLR:	93 93 0	93 93 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.824E+01 .824E+01 0.	0 0 0	0 0 0	0 0 0	36 36 0	57 57 0
1/ 9/78 *	ABB	389 50	391 55	309 37	FLT IN NOT	TOT: CLR: CLR:	89 89 0	89 89 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.353E+00 .353E+00 0.	0 0 0	0 0 0	0 0 0	1 1 0	88 88 0
1/15/78 *	ABB	388 48	410 54	290 35	FLT IN NOT	TOT: CLR: CLR:	116 116 0	116 116 0	0 0 0	66 66 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.327E+01 .327E+01 0.	0 0 0	27 27 0	56 56 0	19 19 0	97 97 0
1/18/78	ABB	402 39	430 40	297 35	FLT IN NOT	TOT: CLR: CLR:	90 89 1	90 89 1	0 0 0	54 54 0	0 0 0	.8 0.0 70.6	.0 0.0 1.0	.254E+04 .599E+02 .223E+06	0 0 0	20 20 0	27 27 0	35 34 1	55 55 0
2/ 8/78 *	ABB	369 46	390 54	350 36	FLT IN NOT	TOT: CLR: CLR:	41 41 0	41 41 0	0 0 0	22 22 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.297E+01 .297E+01 0.	0 0 0	49 49 0	75 75 0	12 12 0	29 29 0
2/13/78 *	ABB	404 49	430 55	195 37	FLT IN NOT	TOT: CLR: CLR:	103 102 1	103 102 1	67 67 0	52 52 0	0 0 0	.2 0.0 25.1	.0 0.0 5.0	.948E+02 .933E+02 .254E+03	661 661 0	35 35 0	52 52 0	2 1 1	101 101 0
2/16/78	ABB	395 38	410 39	279 35	FLT IN NOT	TOT: CLR: CLR:	92 90 2	92 90 2	0 0 0	53 51 2	4 3 1	.0 0.0 1.6	.0 0.0 1.5	.357E+02 .361E+02 .164E+02	0 0 0	37 36 61	14 14 19	60 59 1	32 31 1
3/25/77	AAA	393 47	431 52	208 35	FLT IN NOT	TOT: CLR: CLR:	50 35 15	50 35 15	24 15 9	41 29 12	11 1 10	9.4 0.0 31.2	1.1 0.0 3.8	.304E+05 0. .101E+06	395 593 66	44 21 98	12 9 18	0 0 0	0 0 0
4/ 7/77	AAA	390 40	410 44	236 35	FLT IN NOT	TOT: CLR: CLR:	100 91 9	0 0 0	0 0 0	0 0 0	0 0 0	3.6 0.0 39.5	.1 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	49 40 9	51 51 0
4/ 7/77 *	AAA	384 50	432 58	261 35	FLT IN NOT	TOT: CLR: CLR:	117 115 2	0 0 0	0 0 0	0 0 0	0 0 0	.2 0.0 10.4	.0 0.0 1.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	16 14 2	101 101 0
4/11/77	AAA	368 41	370 44	271 34	FLT IN NOT	TOT: CLR: CLR:	96 57 39	0 0 0	0 0 0	0 0 0	0 0 0	17.7 0.0 43.6	1.5 0.0 3.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	52 25 27	44 32 12
4/11/77 *	AAA	393 47	431 55	290 35	FLT IN NOT	TOT: CLR: CLR:	122 104 16	0 0 0	0 0 0	0 0 0	0 0 0	3.3 0.0 22.2	.5 0.0 3.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	36 20 18	84 84 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			0Z	RH	H2O	TROP N	STRAT N		
						CLD	PD5	0Z	H2O, H2S	%TIC	PATCHES	PD5								
HND-LAX (CONT.)																				
4/14/77	*	AAA	387 47	390 55	286 35	FLT IN NOT	TOT: CLR: CLR:	125 101 24	0 0 0	0 0 0	8.4 0.0 43.6	.3 0.0 1.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	55 31 24	70 70 0		
4/14/77		AAA	367 41	370 45	205 35	FLT IN NOT	TOT: CLR: CLR:	95 77 18	0 0 0	0 0 0	5.5 0.0 29.0	.6 0.0 3.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	63 45 18	32 32 0		
4/18/77		AAA	403 46	414 52	210 35	FLT IN NOT	TOT: CLR: CLR:	93 89 4	0 0 0	0 0 0	.8 0.0 19.5	.2 0.0 5.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	33 29 4	60 60 0		
4/19/77	*	AAA	395 39	432 43	200 35	FLT IN NOT	TOT: CLR: CLR:	125 93 32	0 0 0	0 0 0	8.8 0.0 34.3	.6 0.0 2.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	99 72 27	26 21 5		
4/21/77	*	AAA	389 50	411 59	298 35	FLT IN NOT	TOT: CLR: CLR:	120 111 9	0 0 0	0 0 0	1.7 0.0 22.4	.2 0.0 2.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	26 17 9	94 94 0		
4/21/77		AAA	386 43	390 48	295 35	FLT IN NOT	TOT: CLR: CLR:	92 88 4	0 0 0	0 0 0	.6 0.0 14.6	.1 0.0 2.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	60 56 4	32 32 0		
4/27/77		AAA	374 40	390 44	296 35	FLT IN NOT	TOT: CLR: CLR:	97 75 22	97 75 22	59 47 12	0 0 0	10.0 0.0 44.1	.2 0.0 .9	.263E+05 .132E+04 .111E+06	367 434 104	0 0 0	0 0 0	52 30 22	45 45 0	
4/27/77	*	AAA	375 45	411 51	200 35	FLT IN NOT	TOT: CLR: CLR:	115 95 20	115 95 20	68 56 12	0 0 0	11.2 0.0 64.5	.4 0.0 2.3	.505E+05 .121E+04 .285E+06	429 506 69	0 0 0	0 0 0	59 39 20	56 56 0	
4/30/77	*	AAA	390 49	410 58	287 35	FLT IN NOT	TOT: CLR: CLR:	113 107 6	113 107 6	76 73 3	0 0 0	3.2 0.0 60.0	.1 0.0 1.2	.149E+05 .328E+02 .280E+06	642 662 163	0 0 0	0 0 0	13 7 6	100 100 0	
4/30/77		AAA	361 41	370 46	280 35	FLT IN NOT	TOT: CLR: CLR:	90 66 24	90 66 24	58 41 17	0 0 0	12.4 0.0 46.5	.5 0.0 2.0	.512E+05 .407E+03 .191E+06	283 365 83	0 0 0	0 0 0	57 35 22	33 31 2	
4/ 8/78	*	ABB	372 47	391 54	205 36	FLT IN NOT	TOT: CLR: CLR:	116 113 3	116 113 3	20 19 1	67 65 2	8 8 0	.1 0.0 4.1	.0 0.0 1.3	.243E+03 .195E+03 .207E+04	64 62 87	61 60 72	46 46 45	36 33 3	80 80 0
4/20/78		ABB	387 42	390 45	241 35	FLT IN NOT	TOT: CLR: CLR:	94 72 22	94 72 22	0 0 0	19 19 0	11 11 0	11.4 0.0 48.6	.3 0.0 1.4	.236E+05 .962E+03 .975E+05	0 0 0	83 83 0	35 35 0	36 18 18	58 54 4
4/29/78	*	ABB	381 48	411 56	227 35	FLT IN NOT	TOT: CLR: CLR:	122 109 13	122 109 13	0 0 0	67 63 4	17 13 4	5.9 0.0 55.4	.2 0.0 2.3	.311E+05 .553E+03 .288E+06	0 0 0	67 65 100	55 55 48	29 16 13	93 93 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT				TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HND-LAX (CONT.)																			
5/ 5/78 *	ABB	368 46	411 54	197 35	FLT IN NOT	TOT CLR CLR	118 92 26	118 92 26	0 52 14	66 7 14	21	7.0 0.0 31.9	.7 0.0 3.1	.130E+05 .255E+03 .582E+05	0 0 0	68 59 100	67 59 96	57 31 26	61 61 0
5/17/78 *	ABB	377 47	412 55	260 35	FLT IN NOT	TOT CLR CLR	118 118 0	118 118 0	77 77 0	52 52 0	10	0.0 0.0 0.0	0.0 0.0 0.0	.460E+02 .460E+02 0.	347 347 0	45 45 0	34 34 0	50 50 0	68 68 0
6/ 4/77	AAA	389 39	410 42	257 35	FLT IN NOT	TOT CLR CLR	94 72 22	94 72 22	62 48 14	0 0 0	0	6.9 0.0 29.6	1.0 0.0 4.1	.261E+05 .638E+03 .109E+06	186 221 67	0 0 0	0 0 0	72 50 22	22 22 0
7/ 5/77	ACA	393 42	429 46	213 35	FLT IN NOT	TOT CLR CLR	87 62 25	0 0 0	0 0 0	0 0 0	0	7.4 0.0 25.8	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	69 44 25	18 18 0
7/ 5/77 *	ACA	386 49	391 55	197 36	FLT IN NOT	TOT CLR CLR	116 113 3	0 0 0	0 0 0	0 0 0	0	.9 0.0 33.5	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	46 43 3	70 70 0
7/ 9/77 *	ACA	376 43	410 49	261 35	FLT IN NOT	TOT CLR CLR	116 99 17	116 99 17	74 62 12	0 0 0	0	3.6 0.0 24.7	0.0 0.0 0.0	.156E+05 .140E+04 .984E+05	139 147 98	0 0 0	0 0 0	116 99 17	0 0 0
7/ 9/77	ACA	393 42	410 47	281 35	FLT IN NOT	TOT CLR CLR	90 78 12	90 78 12	61 52 9	0 0 0	0	2.9 0.0 22.1	0.0 0.0 0.0	.155E+05 .119E+04 .108E+06	177 187 120	0 0 0	0 0 0	63 58 5	27 20 7
7/18/77 *	ACA	365 38	390 38	285 35	FLT IN NOT	TOT CLR CLR	49 43 6	49 43 6	31 27 4	0 0 0	0	1.4 0.0 11.8	0.0 0.0 0.0	.916E+04 .264E+03 .729E+05	58 60 45	0 0 0	0 0 0	49 43 6	0 0 0
7/18/77	ACA	374 45	390 51	284 35	FLT IN NOT	TOT CLR CLR	53 43 10	53 43 10	36 29 7	0 0 0	0	1.8 0.0 9.6	0.0 0.0 0.0	.741E+04 .246E+04 .287E+05	152 164 103	0 0 0	0 0 0	47 37 10	6 6 0
8/17/77 *	ABA	373 45	390 52	203 35	FLT IN NOT	TOT CLR CLR	113 85 28	113 85 28	74 58 16	0 0 0	0	6.0 0.0 24.4	1.3 0.0 5.3	.391E+05 .138E+05 .116E+06	138 165 40	0 0 0	0 0 0	81 53 28	32 32 0
8/17/77	ABA	388 42	412 45	280 35	FLT IN NOT	TOT CLR CLR	97 71 26	97 71 26	61 45 16	0 0 0	0	10.6 0.0 39.7	.8 0.0 3.0	.406E+05 .109E+03 .151E+06	133 166 39	0 0 0	0 0 0	68 42 26	29 29 0
8/20/77 *	ABA	365 48	370 55	209 35	FLT IN NOT	TOT CLR CLR	105 99 6	105 99 6	68 66 2	0 0 0	0	2.9 0.0 51.4	.2 0.0 4.2	.111E+05 .113E+03 .193E+06	224 229 55	0 0 0	0 0 0	50 45 5	55 54 1
8/20/77	ABA	392 40	411 43	281 35	FLT IN NOT	TOT CLR CLR	84 66 18	84 66 18	52 42 10	0 0 0	0	9.9 0.0 46.4	.8 0.0 3.5	.711E+05 .190E+03 .331E+06	91 104 36	0 0 0	0 0 0	83 65 18	1 1 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	PD5	OZ	RH	H2O	TRCP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	XTIC	PATCHES							
HND-LAX (CONT.)																			
8/26/77	ABA	384	411	274	FLT TOT:	87	87	51	0	0	12.1	1.1	.328E+05	52	0	0	87	0	
		42	47	35	IN CLR:	57	57	37	0	0	0.0	0.0	.802E+02	56	0	0	57	0	
					NOT CLR:	30	30	14	0	0	35.2	3.3	.950E+05	40	0	0	30	0	
8/26/77 *	ABA	379	411	236	FLT TOT:	116	116	74	0	0	1.9	.5	.630E+04	134	0	0	69	47	
		46	55	35	IN CLR:	103	103	64	0	0	0.0	0.0	.138E+03	151	0	0	56	47	
					NOT CLR:	13	13	10	0	0	16.7	4.3	.551E+05	20	0	0	13	0	
8/29/77 *	ABA	384	410	206	FLT TOT:	108	108	70	0	0	.3	.2	.447E+03	173	0	0	58	50	
		47	55	35	IN CLR:	102	102	65	0	0	0.0	0.0	.138E+03	182	0	0	52	50	
					NOT CLR:	6	6	5	0	0	5.6	3.5	.571E+04	48	0	0	6	0	
8/29/77	ABA	391	410	261	FLT TOT:	91	91	57	0	0	1.3	.3	.234E+04	115	0	0	83	8	
		42	47	35	IN CLR:	86	86	53	0	0	0.0	0.0	.108E+03	119	0	0	78	8	
					NOT CLR:	5	5	4	0	0	23.5	4.6	.407E+05	56	0	0	5	0	
9/ 1/77 *	ABA	397	410	281	FLT TOT:	120	120	82	0	0	.9	.2	.939E+04	233	0	0	49	71	
		47	54	35	IN CLR:	114	114	78	0	0	0.0	0.0	.131E+03	241	0	0	43	71	
					NOT CLR:	6	6	4	0	0	18.6	3.3	.185E+06	69	0	0	6	0	
9/ 1/77	ABA	396	430	206	FLT TOT:	103	103	69	0	0	1.6	.5	.371E+04	138	0	0	61	42	
		43	47	34	IN CLR:	93	93	63	0	0	0.0	0.0	.990E+02	141	0	0	56	37	
					NOT CLR:	10	10	6	0	0	16.5	5.0	.373E+05	102	0	0	5	5	
9/ 7/77 *	ABA	384	430	280	FLT TOT:	115	115	74	0	0	1.2	.3	.336E+04	89	0	0	98	17	
		40	43	35	IN CLR:	103	103	65	0	0	0.0	0.0	.237E+03	92	0	0	90	13	
					NOT CLR:	12	12	9	0	0	11.7	3.3	.302E+05	69	0	0	8	4	
9/ 7/77	ABA	390	411	240	FLT TOT:	102	102	61	0	0	3.7	.4	.996E+04	129	0	0	73	29	
		46	54	35	IN CLR:	92	92	55	0	0	0.0	0.0	.120E+03	133	0	0	63	29	
					NOT CLR:	10	10	6	0	0	37.8	3.7	.100E+06	87	0	0	10	0	
9/11/77 *	ABA	382	390	254	FLT TOT:	109	109	73	0	0	1.7	.5	.360E+04	95	0	0	102	7	
		41	45	35	IN CLR:	94	94	62	0	0	0.0	0.0	.494E+02	103	0	0	87	7	
					NOT CLR:	15	15	11	0	0	12.2	3.7	.258E+05	48	0	0	15	0	
9/11/77	ABA	388	410	278	FLT TOT:	107	107	72	0	0	4.2	.5	.935E+04	101	0	0	84	23	
		45	50	35	IN CLR:	88	88	57	0	0	0.0	0.0	.636E+02	118	0	0	65	23	
					NOT CLR:	19	19	15	0	0	23.4	3.1	.524E+05	39	0	0	19	0	
9/14/77	ABA	398	430	250	FLT TOT:	99	99	67	0	0	4.4	1.1	.106E+05	133	0	0	71	28	
		46	55	35	IN CLR:	74	74	51	0	0	0.0	0.0	.347E+02	154	0	0	46	28	
					NOT CLR:	25	25	16	0	0	17.3	4.3	.418E+05	64	0	0	25	0	
9/14/77 *	ABA	391	430	290	FLT TOT:	106	106	69	0	0	.0	.0	.255E+03	78	0	0	106	0	
		39	42	35	IN CLR:	105	105	68	0	0	0.0	0.0	.403E+02	78	0	0	105	0	
					NOT CLR:	1	1	1	0	0	2.4	4.0	.228E+05	62	0	0	1	0	
9/17/77	ABA	410	410	410	FLT TOT:	6	6	2	0	0	0.0	0.0	0.	6	0	0	6	0	
		37	38	36	IN CLR:	6	6	2	0	0	0.0	0.0	0.	6	0	0	6	0	
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT		
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HND-LAX (CONT.)																			
9/21/77	ABA	386 47	410 49	369 42	FLT IN NOT	TOT: CLR: CLR:	62 53 9	62 53 9	33 29 4	0 0 0	0 0 0	3.9 0.0 26.6	.4 0.0 2.7	.180E+05 .359E+02 .124E+06	95 103 38	0 0 0	0 0 0	56 47 9	6 6 0
9/24/77 *	ABA	374 42	410 45	318 35	FLT IN NOT	TOT: CLR: CLR:	109 101 8	0 0 0	63 57 6	0 0 0	0 0 0	.8 0.0 10.8	.2 0.0 2.8	0. 0. 0.	133 141 58	0 0 0	0 0 0	90 82 8	19 19 0
9/24/77	ABA	397 44	429 50	276 35	FLT IN NOT	TOT: CLR: CLR:	102 96 6	0 0 0	66 62 4	0 0 0	0 0 0	.1 0.0 2.4	.2 0.0 3.2	0. 0. 0.	108 108 105	0 0 0	0 0 0	84 79 5	18 17 1
10/ 4/77	ABB	400 43	410 48	304 35	FLT IN NOT	TOT: CLR: CLR:	95 80 15	0 0 0	61 52 9	0 0 0	0 0 0	7.0 0.0 44.5	.9 0.0 5.7	0. 0. 0.	139 154 48	0 0 0	0 0 0	50 35 15	45 45 0
10/18/77	ABB	387 43	410 47	210 35	FLT IN NOT	TOT: CLR: CLR:	76 64 12	0 0 0	50 43 7	0 0 0	0 0 0	7.5 0.0 47.5	.4 0.0 2.7	0. 0. 0.	118 132 35	0 0 0	0 0 0	44 32 12	32 32 0
10/18/77 *	ABB	390 47	450 54	285 35	FLT IN NOT	TOT: CLR: CLR:	122 122 0	0 0 0	82 82 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	244 244 0	0 0 0	0 0 0	38 38 0	84 84 0
10/19/77 *	ABB	394 48	430 55	287 35	FLT IN NOT	TOT: CLR: CLR:	119 117 2	0 0 0	80 78 2	0 0 0	0 0 0	.1 0.0 5.5	.1 0.0 5.0	0. 0. 0.	243 247 101	0 0 0	0 0 0	31 30 1	88 87 1
10/19/77	ABB	381 42	390 45	268 35	FLT IN NOT	TOT: CLR: CLR:	82 56 26	0 0 0	52 38 14	0 0 0	0 0 0	8.7 0.0 27.5	1.0 0.0 3.3	0. 0. 0.	102 118 57	0 0 0	0 0 0	68 42 26	14 14 0
11/ 1/77	ABB	390 44	409 48	329 35	FLT IN NOT	TOT: CLR: CLR:	97 92 5	97 92 5	64 59 5	0 0 0	0 0 0	.6 0.0 11.9	.2 0.0 3.2	.135E+04 .141E+03 .235E+05	115 120 60	0 0 0	0 0 0	48 43 5	49 49 0
11/ 1/77 *	ABB	379 39	410 43	309 35	FLT IN NOT	TOT: CLR: CLR:	120 120 0	120 120 0	80 80 0	1 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.157E+02 .157E+02 0.	79 79 0	70 70 0	203 203 0	101 101 0	19 19 0
HND-SFO																			
1/22/76 *	BBA	343 49	370 56	205 37	FLT IN NOT	TOT: CLR: CLR:	72 67 5	0 0 0	72 67 5	0 0 0	0 0 0	1.1 0.0 15.8	.3 0.0 3.8	0. 0. 0.	338 362 9	0 0 0	0 0 0	15 10 5	57 57 0
3/18/76 *	BBA	356 49	390 57	202 37	FLT IN NOT	TOT: CLR: CLR:	76 76 0	0 0 0	76 76 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	524 524 0	0 0 0	0 0 0	4 4 0	72 72 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH		TROF		STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5						N		N	
HND-SFO (CONT.)																						
3/25/76	BBA	355 41	371 44	208 35	FLT IN NOT	TOT: CLR: CLR:	56 45 11	0 0 0	56 45 11	0 0 0	4.6 0.0 23.2	.6 0.0 3.1	0. 0. 0.	309 332 213	0 0 0	0 0 0	25 17 8			31 28 3		
4/21/76	BBA	363 42	391 46	203 36	FLT IN NOT	TOT: CLR: CLR:	47 44 3	0 0 0	47 44 3	0 0 0	5.7 0.0 88.9	.0 0.0 .7	0. 0. 0.	258 270 80	0 0 0	0 0 0	30 27 3			17 17 0		
5/ 2/78	ABB	392 43	410 45	285 35	FLT IN NOT	TOT: CLR: CLR:	93 77 16	93 77 16	0 0 0	46 39 7	23 17 6	3.4 0.0 19.6	.2 0.0 1.1	.966E+04 .110E+04 .509E+05	0 0 0	75 72 92	35 34 43	43 32 11		50 45 5		
5/ 5/78	ABB	372 43	391 47	282 36	FLT IN NOT	TOT: CLR: CLR:	94 73 21	94 73 21	0 0 0	51 40 11	23 12 11	7.4 0.0 33.2	.7 0.0 3.2	.282E+05 .540E+03 .125E+06	0 0 0	76 69 100	50 45 71	59 36 21		35 35 0		
5/17/78	ABB	391 42	412 45	259 35	FLT IN NOT	TOT: CLR: CLR:	97 97 0	96 96 0	64 64 0	49 49 0	8 8 0	0.0 0.0 0.0	0.0 0.0 0.	.316E+01 .316E+01 0.	257 257 0	60 60 0	21 21 0	54 54 0		43 43 0		
5/20/78	ABB	389 43	412 46	186 36	FLT IN NOT	TOT: CLR: CLR:	95 95 0	95 95 0	64 64 0	49 49 0	11 11 0	0.0 0.0 0.0	0.0 0.0 0.	.411E+01 .411E+01 0.	290 290 0	56 56 0	22 22 0	35 35 0		60 60 0		
9/ 5/76 *	BBA	326 50	330 58	243 37	FLT IN NOT	TOT: CLR: CLR:	110 110 0	0 0 0	68 68 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	108 108 0	0 0 0	0 0 0	92 92 0			18 18 0		
10/ 7/77 *	BCB	357 38	391 41	267 35	FLT IN NOT	TOT: CLR: CLR:	112 63 49	112 63 49	0 0 0	0 0 0	0 0 0	14.9 0.0 34.1	0.0 0.0 0.0	.453E+05 .122E+02 .104E+06	0 0 0	0 0 0	0 0 0	112 63 49		0 0 0		
10/ 7/77	BCB	362 45	391 50	219 36	FLT IN NOT	TOT: CLR: CLR:	88 61 27	88 61 27	0 0 0	0 0 0	0 0 0	7.4 0.0 24.2	0.0 0.0 0.0	.175E+05 .983E+02 .569E+05	0 0 0	0 0 0	0 0 0	85 58 27		3 3 0		
10/13/77	BCB	358 43	371 45	200 37	FLT IN NOT	TOT: CLR: CLR:	84 67 17	84 67 17	0 0 0	0 0 0	0 0 0	6.9 0.0 34.0	0.0 0.0 0.0	.167E+05 .914E+01 .823E+05	0 0 0	0 0 0	0 0 0	80 63 17		4 4 0		
HND-YVR																						
10/ 6/77 *	BCB	356 41	391 49	272 35	FLT IN NOT	TOT: CLR: CLR:	104 86 18	104 86 18	0 0 0	0 0 0	0 0 0	5.6 0.0 32.2	0.0 0.0 0.0	.164E+05 .233E+03 .936E+05	0 0 0	0 0 0	0 0 0	104 86 18		0 0 0		

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HNL-LAS																				
	5/12/76	CAA	335 29	370 35	208 21	FLT IN NOT	TOT: CLR: CLR:	53 51 2	0 0 0	35 33 2	0 0 0	0	.3 0.0 7.1	.1 0.0 1.5	0. 0. 0.	76 78 49	0 0 0	0 0 0	53 51 2	0 0 0
HNL-LAX																				
	1/27/76	* CAA	341 28	351 34	186 21	FLT IN NOT	TOT: CLR: CLR:	34 34 0	0 0 0	34 34 0	34 34 0	0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	52 52 0	33 33 0	54 54 0	34 34 0	0 0 0
	1/27/76	CAA	324 28	330 34	203 21	FLT IN NOT	TOT: CLR: CLR:	34 30 4	0 0 0	34 30 4	34 30 4	4	.6 0.0 5.4	.2 0.0 1.5	0. 0. 0.	36 37 35	46 39 100	75 73 85	34 30 4	0 0 0
	2/ 2/76	* CAA	381 28	390 34	223 21	FLT IN NOT	TOT: CLR: CLR:	41 40 1	0 0 0	41 40 1	36 36 0	8	.3 0.0 12.9	.0 0.0 1.0	0. 0. 0.	104 106 20	45 45 0	34 34 0	30 29 1	11 11 0
	2/ 3/76	CAA	360 29	371 33	209 21	FLT IN NOT	TOT: CLR: CLR:	37 37 0	0 0 0	37 37 0	31 31 0	1	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	92 92 0	19 19 0	21 21 0	29 29 0	8 8 0
	2/ 5/76	CAA	361 28	371 34	209 21	FLT IN NOT	TOT: CLR: CLR:	35 20 15	0 0 0	35 20 15	29 16 13	16	10.3 0.0 23.9	1.3 0.0 3.1	0. 0. 0.	128 198 35	73 51 100	55 48 63	26 11 15	9 9 0
	2/ 5/76	* CAA	341 28	350 34	199 20	FLT IN NOT	TOT: CLR: CLR:	39 27 12	0 0 0	39 27 12	35 24 11	25	13.7 0.0 44.6	.6 0.0 1.9	0. 0. 0.	74 91 58	86 80 100	62 44 101	37 25 12	2 2 0
	2/ 6/76	* CAA	339 28	350 34	221 21	FLT IN NOT	TOT: CLR: CLR:	33 28 5	0 0 0	33 28 5	28 25 3	8	5.7 0.0 37.6	.3 0.0 2.2	0. 0. 0.	149 171 27	59 54 100	71 67 107	24 19 5	9 9 0
	2/ 6/76	* BBA	345 27	353 34	213 21	FLT IN NOT	TOT: CLR: CLR:	23 14 9	0 0 0	23 14 9	0 0 0	0	19.8 0.0 50.5	1.6 0.0 4.0	0. 0. 0.	67 99 18	0 0 0	0 0 0	20 11 9	3 3 0
	2/ 7/76	BBA	302 28	330 34	195 22	FLT IN NOT	TOT: CLR: CLR:	10 6 4	0 0 0	10 6 4	0 0 0	0	18.1 0.0 45.2	.5 0.0 1.3	0. 0. 0.	24 34 3	0 0 0	0 0 0	10 6 4	0 0 0
	2/ 8/76	* BBA	351 26	351 31	351 21	FLT IN NOT	TOT: CLR: CLR:	23 15 8	0 0 0	23 15 8	0 0 0	0	13.8 0.0 39.7	1.0 0.0 3.0	0. 0. 0.	17 19 14	0 0 0	0 0 0	23 15 8	0 0 0
	2/ 9/76	BBA	326 29	331 34	211 21	FLT IN NOT	TOT: CLR: CLR:	30 28 2	0 0 0	30 28 2	0 0 0	0	2.6 0.0 42.7	.2 0.0 3.0	0. 0. 0.	54 57 18	0 0 0	0 0 0	30 28 2	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
HNL-LAX (CONT.)																				
2/10/76	*	BBA	345 28	351 34	212 21	FLT TOT: IN CLR: NOT CLR:	34 32 2	0 0 0	34 32 2	0 0 0	0 0 0	0 0 0	.4 0.0 6.3	.2 0.0 3.0	0. 0. 0.	73 76 23	0 0 0	0 0 0	30 28 2	4 4 0
2/11/76		CAA	322 28	330 34	202 21	FLT TOT: IN CLR: NOT CLR:	29 29 0	0 0 0	29 29 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	50 50 0	0 0 0	0 0 0	29 29 0	0 0 0
2/26/76	*	CAA	330 29	390 34	215 21	FLT TOT: IN CLR: NOT CLR:	40 15 25	0 0 0	40 15 25	39 14 25	39 14 25	39 14 25	20.0 0.0 32.0	1.4 0.0 2.2	0. 0. 0.	49 39 44	100 100 100	40 26 48	40 15 25	0 0 0
2/27/76		CAA	363 29	370 34	238 22	FLT TOT: IN CLR: NOT CLR:	26 7 19	0 0 0	26 7 19	26 7 19	26 7 19	26 7 19	29.6 0.0 40.6	2.1 0.0 2.8	0. 0. 0.	44 46 43	100 100 100	77 33 94	26 7 19	0 0 0
2/29/76	*	CAA	342 28	350 34	211 21	FLT TOT: IN CLR: NOT CLR:	40 19 21	0 0 0	40 19 21	39 18 21	27 6 21	27 6 21	25.3 0.0 48.2	1.5 0.0 2.8	0. 0. 0.	42 51 34	77 51 100	74 82 67	40 19 21	0 0 0
2/ 8/79		CAB	339 29	341 34	289 22	FLT TOT: IN CLR: NOT CLR:	46 24 22	46 24 22	30 15 15	23 11 12	1 0 1	1 0 1	15.9 0.0 33.1	1.4 0.0 2.9	.344E+05 .265E+03 .716E+05	49 52 45	71 62 80	67 56 77	46 24 22	0 0 0
2/10/79		CAB	337 29	342 34	278 22	FLT TOT: IN CLR: NOT CLR:	43 7 36	43 7 36	26 4 22	22 2 20	12 0 12	12 0 12	36.1 0.0 43.1	2.6 0.0 3.1	.111E+06 .165E+04 .132E+06	46 54 45	91 83 92	120 111 121	43 7 36	0 0 0
2/11/79	*	BBB	378 28	401 34	264 22	FLT TOT: IN CLR: NOT CLR:	55 33 22	0 0 0	35 22 13	27 17 10	1 0 1	1 0 1	14.0 0.0 35.0	1.5 0.0 3.9	0. 0. 0.	49 53 43	41 24 70	28 18 44	55 33 22	0 0 0
2/12/79	*	CAB	348 27	352 34	240 21	FLT TOT: IN CLR: NOT CLR:	61 60 1	61 60 1	39 38 1	29 29 0	0 0 0	0 0 0	.1 0.0 4.7	.0 0.0 1.0	.297E+03 .133E+03 .101E+05	87 88 37	39 39 0	106 106 0	61 60 1	0 0 0
2/14/79	*	CAB	353 28	361 34	218 22	FLT TOT: IN CLR: NOT CLR:	55 50 5	55 50 5	37 34 3	33 31 2	0 0 0	0 0 0	2.2 0.0 24.2	.3 0.0 3.6	.223E+04 .565E+02 .240E+05	171 180 77	43 43 49	86 74 276	38 33 5	17 17 0
2/14/79		CAB	368 29	381 34	217 22	FLT TOT: IN CLR: NOT CLR:	42 42 0	42 42 0	27 27 0	22 22 0	1 1 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.809E+02 .809E+02 0.	154 154 0	59 59 0	93 93 0	22 22 0	20 20 0
2/17/79	*	CAB	346 27	350 34	200 21	FLT TOT: IN CLR: NOT CLR:	61 33 28	61 33 28	38 21 17	35 18 17	11 1 10	11 1 10	31.7 0.0 69.1	.6 0.0 1.3	.603E+05 .396E+03 .131E+06	56 89 16	85 77 92	90 41 143	61 33 28	0 0 0
2/27/79	*	CAB	363 28	371 34	296 21	FLT TOT: IN CLR: NOT CLR:	53 44 9	53 44 9	33 27 6	25 20 5	14 9 5	14 9 5	4.8 0.0 28.4	.4 0.0 2.2	.673E+04 .334E+03 .380E+05	89 95 65	80 76 100	40 42 33	53 44 9	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR			THE FLIGHT			TROP		STRAT	
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HNL-LAX (CONT.)																					
3/ 6/76		CAA	358 29	370 34	209 21	FLT IN NOT	TOT: CLR: CLR:	30 21 9	0 0 0	30 21 9	30 21 9	25 16 9	7.4 0.0 24.6	1.5 0.0 4.9	0. 0. 0.		82 108 21	97 95 100	73 84 49	30 21 9	0 0 0
3/ 6/79		CAB	355 29	360 34	285 21	FLT IN NOT	TOT: CLR: CLR:	36 34 2	36 34 2	23 21 2	17 15 2	8 7 1	.8 0.0 15.3	.2 0.0 3.0	.376E+04 .157E+03 .651E+05		89 92 56	79 81 66	146 157 64	36 34 2	0 0 0
3/ 7/79	*	CAB	346 28	351 34	206 21	FLT IN NOT	TOT: CLR: CLR:	43 41 2	43 41 2	29 27 2	23 22 1	22 21 1	.1 0.0 2.7	.1 0.0 2.5	.244E+03 .248E+03 .154E+03		78 80 52	98 97 100	273 282 69	43 41 2	0 0 0
3/12/79	*	CAB	367 28	371 34	266 21	FLT IN NOT	TOT: CLR: CLR:	52 36 16	52 36 16	31 19 12	29 17 12	19 8 11	6.9 0.0 22.4	.7 0.0 2.3	.166E+05 .358E+04 .459E+05	163 223 68	92 86 99	53 57 47	33 19 14	19 17 2	
3/12/79		CAB	353 28	361 34	193 21	FLT IN NOT	TOT: CLR: CLR:	41 36 5	41 36 5	26 23 3	24 21 3	0 0 0	1.5 0.0 12.0	.4 0.0 3.2	.237E+04 .173E+04 .697E+04	168 184 47	52 54 37	45 38 97	23 18 5	18 18 0	
3/13/79	*	CAB	347 31	371 33	243 21	FLT IN NOT	TOT: CLR: CLR:	16 14 2	15 13 2	10 10 0	8 8 0	5 5 0	.5 0.0 4.1	.4 0.0 3.0	.633E+04 .636E+04 .610E+04	124 124 0	95 95 0	35 35 0	10 9 1	6 5 1	
3/15/79		CAB	355 27	387 34	252 21	FLT IN NOT	TOT: CLR: CLR:	42 26 16	42 26 16	27 17 10	21 14 7	5 0 5	20.0 0.0 52.5	.8 0.0 2.0	.303E+05 .720E+03 .785E+05	90 113 50	81 74 94	52 27 100	0 0 0	0 0 0	
3/16/79		CAB	349 27	382 34	208 21	FLT IN NOT	TOT: CLR: CLR:	14 13 1	9 8 1	9 9 0	10 10 0	0 0 0	1.3 0.0 18.0	.1 0.0 2.0	.513E+05 .410E+05 .134E+06	168 168 0	69 69 0	106 108 0	11 10 1	3 3 0	
3/16/79	*	CAB	343 33	370 34	295 32	FLT IN NOT	TOT: CLR: CLR:	7 4 3	7 4 3	2 1 1	1 1 0	1 1 0	9.0 0.0 20.9	1.0 0.0 2.3	.356E+04 .264E+04 .477E+04	167 213 120	100 100 0	39 39 0	2 2 0	5 2 3	
3/19/79		CAB	351 25	381 34	214 21	FLT IN NOT	TOT: CLR: CLR:	17 17 0	13 13 0	12 12 0	11 11 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.363E+03 .363E+03 0.	94 94 0	48 48 0	74 74 0	14 14 0	3 3 0	
3/21/79		CAB	364 28	380 34	231 21	FLT IN NOT	TOT: CLR: CLR:	43 43 0	43 43 0	26 28 0	24 24 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.142E+03 .142E+03 0.	182 182 0	35 35 0	35 35 0	35 35 0	8 8 0	
3/21/79	*	CAB	361 28	370 34	196 21	FLT IN NOT	TOT: CLR: CLR:	55 55 0	55 55 0	36 36 0	31 31 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.248E+03 .248E+03 0.	191 191 0	39 39 0	41 41 0	46 46 0	9 9 0	
3/24/79	*	CAB	347 28	350 34	217 21	FLT IN NOT	TOT: CLR: CLR:	55 55 0	55 55 0	35 35 0	29 29 0	16 16 0	0.0 0.0 0.0	0.0 0.0 0.0	.678E+03 .678E+03 0.	159 159 0	94 94 0	67 67 0	35 35 0	20 20 0	

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
HNL-LAX (CONT.)																				
3/25/79	*	CAB	347 28	351 34	218 21	FLT IN NOT	TOT: CLR: CLR:	59 38 21	59 38 21	39 26 13	33 21 12	8 4 4	5.3 0.0 14.8	1.2 0.0 3.4	.148E+05 .443E+03 .408E+05	76 84 61	83 84 82	60 62 58	59 38 21	0 0 0
3/27/79	*	CAB	348 28	351 34	242 21	FLT IN NOT	TOT: CLR: CLR:	60 57 3	60 57 3	36 34 2	31 28 3	2 1 1	1.3 0.0 26.0	.2 0.0 3.0	.293E+04 .800E+03 .434E+05	139 142 89	75 73 94	84 88 47	37 34 3	23 23 0
3/27/79		CAB	356 28	360 34	292 21	FLT IN NOT	TOT: CLR: CLR:	44 41 3	44 41 3	28 25 3	21 19 2	4 2 2	1.4 0.0 20.3	.1 0.0 1.7	.290E+04 .106E+04 .261E+05	166 180 47	73 71 100	39 38 53	29 26 3	15 15 0
3/28/79	*	CAB	344 31	392 34	234 21	FLT IN NOT	TOT: CLR: CLR:	17 17 0	15 15 0	11 11 0	10 10 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.838E+03 .838E+03 0.	235 235 0	55 55 0	43 43 0	4 4 0	13 13 0
3/29/79	*	CAB	357 28	371 34	291 21	FLT IN NOT	TOT: CLR: CLR:	56 32 24	56 32 24	36 20 16	6 4 2	6 4 2	15.2 0.0 35.5	.9 0.0 2.1	.479E+05 .103E+04 .110E+06	103 145 62	100 100 100	125 145 84	56 32 24	0 0 0
4/ 3/76		CAA	363 27	370 33	213 21	FLT IN NOT	TOT: CLR: CLR:	28 27 1	0 0 0	28 27 1	25 24 1	20 19 1	.1 0.0 2.7	.1 0.0 2.0	0. 0. 0.	139 141 88	93 93 100	33 33 24	26 27 1	0 0 0
4/ 4/76		BBA	387 26	392 32	316 20	FLT IN NOT	TOT: CLR: CLR:	27 25 2	0 0 0	27 25 2	0 0 0	0 0 0	0.0 0.0 .4	.1 0.0 1.0	0. 0. 0.	202 197 266	0 0 0	0 0 0	22 20 2	5 5 0
4/ 5/76	*	BBA	388 28	392 34	333 21	FLT IN NOT	TOT: CLR: CLR:	36 34 2	0 0 0	36 34 2	0 0 0	0 0 0	.0 0.0 .4	.1 0.0 1.0	0. 0. 0.	190 191 165	0 0 0	0 0 0	32 30 2	4 4 0
4/ 8/76		CAA	359 29	370 34	211 22	FLT IN NOT	TOT: CLR: CLR:	29 24 5	0 0 0	29 24 5	28 23 5	27 22 5	2.2 0.0 12.8	.4 0.0 2.6	0. 0. 0.	79 89 32	100 100 100	70 55 136	29 24 5	0 0 0
4/ 9/76	*	CAA	307 28	310 34	205 21	FLT IN NOT	TOT: CLR: CLR:	34 19 15	0 0 0	34 19 15	33 19 14	29 15 14	11.7 0.0 26.5	1.3 0.0 3.0	0. 0. 0.	66 76 55	95 92 100	235 174 318	34 19 15	0 0 0
4/17/76		CAA	359 29	370 34	205 21	FLT IN NOT	TOT: CLR: CLR:	29 23 6	0 0 0	29 23 6	0 0 0	0 0 0	11.9 0.0 57.5	.1 0.0 .7	0. 0. 0.	81 78 93	0 0 0	0 0 0	29 23 6	0 0 0
4/18/76	*	CAA	343 28	350 34	213 21	FLT IN NOT	TOT: CLR: CLR:	34 23 11	0 0 0	34 23 11	0 0 0	0 0 0	7.6 0.0 23.5	.9 0.0 2.9	0. 0. 0.	84 85 83	0 0 0	0 0 0	34 23 11	0 0 0
5/10/76		CAA	368 30	407 35	190 22	FLT IN NOT	TOT: CLR: CLR:	52 46 6	0 0 0	16 16 0	0 0 0	0 0 0	1.3 0.0 11.2	.4 0.0 3.2	0. 0. 0.	74 74 0	0 0 0	0 0 0	52 46 6	0 0 0

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR			THE FLIGHT	OZ	RH	H2O	TROP N	STRAT N	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
HNL-LAX (CONT.)																				
5/11/76	*	CAA	349 28	350 33	279 21	FLT IN NOT	TOT: CLR: CLR:	46 38 8	0 0 0	7 7 0	0 0 0	7.2 0.0 41.5	.8 0.0 4.9	0. 0. 0.	67 67 0	0 0 0	0 0 0	46 38 8	0 0 0	
5/16/76	*	CAA	372 28	390 34	209 21	FLT IN NOT	TOT: CLR: CLR:	55 55 0	0 0 0	14 14 0	46 46 0	11 11 0	0.0 0.0 0.0	0.0 0.0 0.0	108 108 0	75 75 0	44 44 0	55 55 0	0 0 0	
5/28/76		CAA	376 30	380 34	248 24	FLT IN NOT	TOT: CLR: CLR:	38 38 0	0 0 0	24 24 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	92 92 0	0 0 0	0 0 0	38 38 0	0 0 0	
5/29/76	*	CAA	355 29	360 34	213 22	FLT IN NOT	TOT: CLR: CLR:	48 47 1	0 0 0	31 31 0	0 0 0	.0 0.0 .8	.0 0.0 1.0	0. 0. 0.	71 71 0	0 0 0	0 0 0	48 47 1	0 0 0	
5/18/79		BDB	357 28	381 34	280 21	FLT IN NOT	TOT: CLR: CLR:	51 42 9	51 42 9	32 26 6	27 21 6	2 0 2	2.9 0.0 16.7	.9 0.0 4.9	.108E+06 .102E+04 .605E+06	66 65 72	49 42 73	46 37 74	51 42 9	0 0 0
5/26/79	*	BDB	358 28	370 34	296 21	FLT IN NOT	TOT: CLR: CLR:	51 42 9	51 42 9	31 27 4	26 21 5	2 0 2	3.4 0.0 19.5	.6 0.0 3.4	.356E+05 .104E+04 .197E+06	61 59 73	52 46 79	68 61 97	51 42 9	0 0 0
6/15/78	*	CAB	357 28	360 34	291 21	FLT IN NOT	TOT: CLR: CLR:	58 43 15	58 43 15	38 30 8	33 26 7	5 4 1	4.8 0.0 18.4	.5 0.0 1.8	.781E+04 .366E+04 .197E+05	62 62 62	64 62 70	65 57 97	58 43 15	0 0 0
6/22/78	*	CAB	355 28	360 34	296 21	FLT IN NOT	TOT: CLR: CLR:	56 48 8	56 48 8	36 31 5	31 29 2	5 3 2	3.9 0.0 27.1	.6 0.0 4.5	.905E+04 .560E+03 .600E+05	84 84 33	68 66 100	60 59 69	56 48 8	0 0 0
6/22/78	*	CAB	355 28	361 34	198 21	FLT IN NOT	TOT: CLR: CLR:	56 55 1	56 55 1	37 37 0	32 31 1	0 0 0	.1 0.0 3.9	.0 0.0 2.0	.198E+03 .195E+03 .389E+03	100 100 0	50 49 80	44 44 41	56 55 1	0 0 0
6/22/78		CAB	364 28	371 34	284 21	FLT IN NOT	TOT: CLR: CLR:	45 45 0	45 45 0	29 29 0	25 25 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.669E+02 .669E+02 0.	96 96 0	61 61 0	47 47 0	45 45 0	0 0 0
6/24/78	*	CAB	356 28	361 34	233 21	FLT IN NOT	TOT: CLR: CLR:	59 59 0	59 59 0	39 39 0	34 34 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.413E+02 .413E+02 0.	73 73 0	42 42 0	57 57 0	59 59 0	0 0 0
6/28/78	*	CAB	357 28	360 34	288 21	FLT IN NOT	TOT: CLR: CLR:	56 50 6	56 50 6	36 33 3	31 27 4	4 0 4	1.5 0.0 14.2	.4 0.0 3.8	.146E+04 .318E+03 .110E+05	73 78 22	54 47 100	61 49 141	56 50 6	0 0 0
6/30/78	*	CAB	355 28	360 34	197 21	FLT IN NOT	TOT: CLR: CLR:	58 52 6	58 52 6	37 32 5	33 27 6	3 0 3	1.0 0.0 9.9	.5 0.0 4.5	.238E+04 .240E+03 .209E+05	45 47 29	46 37 85	63 55 98	58 52 6	0 0 0

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT				OZ	RH	H2O	TROP N	STRAT N
					CLD	PD5	OZ	H2O	H2S		%TIC	PATCHES	PD5						
HNL-LAX (CONT.)																			
6/30/78	CAB	338 26	341 34	281 22	FLT IN NOT	TOT: CLR: CLR:	42 37 5	42 37 5	25 21 4	19 19 0	0 0 0	4.2 0.0 35.0	.6 0.0 5.4	.111E+05 .224E+03 .916E+05	38 40 30	27 27 0	53 53 0	42 37 5	0 0 0
6/ 1/79 *	BDB	327 28	331 34	208 21	FLT IN NOT	TOT: CLR: CLR:	51 47 4	51 47 4	32 31 1	30 27 3	8 6 2	.1 0.0 1.4	.1 0.0 1.3	.484E+04 .248E+04 .326E+05	70 71 37	65 64 75	151 126 375	51 47 4	0 0 0
6/ 2/79	BDB	358 28	380 34	224 21	FLT IN NOT	TOT: CLR: CLR:	49 48 1	49 48 1	31 30 1	20 19 1	0 0 0	.1 0.0 4.7	.0 0.0 1.0	.134E+04 .136E+04 .665E+02	119 121 63	43 42 71	41 40 52	49 48 1	0 0 0
6/ 3/79 *	BDB	372 28	391 34	218 21	FLT IN NOT	TOT: CLR: CLR:	53 53 0	53 53 0	34 34 0	20 20 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.645E+04 .645E+04 0.	141 141 0	42 42 0	34 34 0	53 53 0	0 0 0
6/ 3/79 *	CAB	363 28	370 34	231 22	FLT IN NOT	TOT: CLR: CLR:	42 24 18	42 24 18	0 0 0	21 9 12	0 0 0	30.0 0.0 70.1	.0 0.0 .1	.301E+05 .305E+04 .661E+05	0 0 0	32 34 30	40 23 54	42 24 18	0 0 0
6/ 4/79	CAB	376 28	381 33	295 21	FLT IN NOT	TOT: CLR: CLR:	48 41 7	48 41 7	0 0 0	25 20 5	2 0 2	2.4 0.0 16.2	.3 0.0 2.3	.748E+04 .311E+04 .331E+05	0 0 0	34 29 54	29 16 84	48 41 7	0 0 0
6/ 7/79 *	CAB	347 28	351 34	265 21	FLT IN NOT	TOT: CLR: CLR:	53 45 8	53 45 8	0 0 0	28 24 4	0 0 0	3.4 0.0 22.6	.2 0.0 1.4	.119E+05 .366E+04 .585E+05	0 0 0	39 38 44	42 42 41	53 45 8	0 0 0
7/ 2/78 *	CAB	348 27	351 33	293 21	FLT IN NOT	TOT: CLR: CLR:	55 50 5	55 50 5	35 32 3	28 26 2	1 0 1	1.1 0.0 12.2	.5 0.0 6.0	.758E+03 .423E+02 .792E+04	33 34 19	44 40 92	72 66 149	55 50 5	0 0 0
7/ 4/78 *	CAB	348 27	351 33	279 21	FLT IN NOT	TOT: CLR: CLR:	53 47 6	53 47 6	33 29 4	29 27 2	13 12 1	.5 0.0 4.8	.3 0.0 2.8	.337E+03 .280E+02 .276E+04	26 27 24	86 87 85	171 170 194	53 47 6	0 0 0
7/ 5/78	CAB	365 28	370 34	254 21	FLT IN NOT	TOT: CLR: CLR:	47 47 0	47 47 0	31 31 0	26 26 0	3 3 0	0.0 0.0 0.0	0.0 0.0 0.0	.207E+02 .207E+02 0.	36 36 0	35 35 0	59 59 0	47 47 0	0 0 0
7/ 7/78	CAB	365 28	371 34	239 21	FLT IN NOT	TOT: CLR: CLR:	48 48 0	48 48 0	32 32 0	27 27 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.783E+02 .783E+02 0.	61 61 0	18 18 0	30 30 0	46 48 0	0 0 0
7/10/78 *	CAB	358 28	360 34	311 21	FLT IN NOT	TOT: CLR: CLR:	52 52 0	52 52 0	32 32 0	30 30 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.282E+02 .282E+02 0.	39 39 0	19 19 0	28 28 0	52 52 0	0 0 0
7/10/78	CAB	337 29	341 34	262 22	FLT IN NOT	TOT: CLR: CLR:	48 48 0	48 48 0	32 32 0	24 24 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.877E+02 .877E+02 0.	34 34 0	18 18 0	54 54 0	48 48 0	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT		OZ RH H2O			TROP N	STRAT N		
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
HNL-LAX (CONT.)																				
7/17/78		CAB	338 29	341 34	282 22	FLT IN NOT	TOT: CLR: CLR:	46 46 0	46 46 0	30 30 0	24 24 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.384E+02 .384E+02 0.	52 52 0	34 34 0	76 76 0	46 46 0	0 0 0
7/19/78	*	CAB	354 28	361 34	205 21	FLT IN NOT	TOT: CLR: CLR:	52 52 0	52 52 0	34 34 0	31 31 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.109E+02 .109E+02 0.	49 49 0	10 10 0	42 42 0	52 52 0	0 0 0
7/19/78		CAB	365 29	381 34	277 22	FLT IN NOT	TOT: CLR: CLR:	46 46 0	46 46 0	29 29 0	23 23 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.550E+01 .550E+01 0.	55 55 0	16 16 0	34 34 0	46 46 0	0 0 0
7/19/78	*	CAB	354 28	361 34	191 21	FLT IN NOT	TOT: CLR: CLR:	52 52 0	52 52 0	34 34 0	29 29 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.278E+02 .278E+02 0.	50 50 0	26 26 0	70 70 0	52 52 0	0 0 0
7/21/78	*	CAB	357 28	361 34	291 21	FLT IN NOT	TOT: CLR: CLR:	51 50 1	51 50 1	33 33 0	30 29 1	0 0 0	.6 0.0 31.4	.0 0.0 2.0	.754E+01 .769E+01 0.	47 47 0	25 23 74	53 39 475	51 50 1	0 0 0
7/23/78		CAB	367 29	371 34	252 25	FLT IN NOT	TOT: CLR: CLR:	37 37 0	37 37 0	24 24 0	20 20 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.258E+02 .258E+02 0.	56 56 0	21 21 0	28 28 0	37 37 0	0 0 0
10/23/78		BBB	372 29	381 34	210 22	FLT IN NOT	TOT: CLR: CLR:	49 49 0	49 49 0	31 31 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.130E+01 .130E+01 0.	39 39 0	0 0 0	0 0 0	49 49 0	0 0 0
11/ 4/78	*	BBB	355 28	360 34	251 21	FLT IN NOT	TOT: CLR: CLR:	51 29 22	51 29 22	32 18 14	26 13 13	6 1 5	15.4 0.0 35.7	1.3 0.0 3.0	.960E+05 .938E+05 .989E+05	32 46 14	67 48 86	94 76 112	51 29 22	0 0 0
11/ 7/78		BBB	344 29	380 34	228 22	FLT IN NOT	TOT: CLR: CLR:	45 18 27	45 18 27	31 12 19	11 2 9	5 0 5	26.3 0.0 43.9	1.4 0.0 2.3	.831E+05 .350E+03 .138E+06	40 53 32	85 37 95	70 71 70	45 18 27	0 0 0
11/12/78	*	BBB	355 29	360 34	245 22	FLT IN NOT	TOT: CLR: CLR:	50 50 0	50 50 0	32 32 0	29 29 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.389E+01 .389E+01 0.	83 83 0	18 18 0	25 25 0	50 50 0	0 0 0
11/12/78		BBB	375 28	380 34	270 22	FLT IN NOT	TOT: CLR: CLR:	50 50 0	50 50 0	33 33 0	30 30 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.394E+01 .394E+01 0.	58 58 0	21 21 0	27 27 0	46 46 0	4 4 0
11/13/78	*	BBB	332 28	360 34	239 21	FLT IN NOT	TOT: CLR: CLR:	48 48 0	48 48 0	33 33 0	27 27 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.164E+02 .164E+02 0.	72 72 0	14 14 0	31 31 0	48 48 0	0 0 0
11/14/78		BBB	337 29	340 34	265 22	FLT IN NOT	TOT: CLR: CLR:	45 45 0	45 45 0	29 29 0	20 20 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.427E+01 .427E+01 0.	73 73 0	15 15 0	33 33 0	45 45 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
HNL-LAX (CONT.)																		
12/31/75	CAA	363 29	370 34	213 22	FLT TOT: IN CLR: NOT CLR:	28 21 7	0 0 0	28 21 7	0 0 0	0 0 0	7.2 0.0 28.8	.7 0.0 2.7	0. 0. 0.	47 52 33	0 0 0	0 0 0	0 0 0	0 0 0
12/14/77	BCB	372 28	380 34	254 21	FLT TOT: IN CLR: NOT CLR:	45 44 1	45 44 1	30 29 1	0 0 0	0 0 0	.5 0.0 23.5	0.0 0.0 0.0	.101E+02 .962E+01 .306E+02	36 35 65	0 0 0	0 0 0	45 44 1	0 0 0
12/15/77 *	BCB	345 25	350 32	255 20	FLT TOT: IN CLR: NOT CLR:	54 54 0	54 54 0	34 34 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.235E+01 .235E+01 0.	35 35 0	0 0 0	0 0 0	54 54 0	0 0 0
12/16/77	BCB	335 29	341 34	249 22	FLT TOT: IN CLR: NOT CLR:	37 37 0	37 37 0	20 20 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.302E+02 .302E+02 0.	53 53 0	0 0 0	0 0 0	37 37 0	0 0 0
12/17/77 *	BCB	347 28	351 33	262 21	FLT TOT: IN CLR: NOT CLR:	59 59 0	59 59 0	36 36 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.428E+01 .428E+01 0.	54 54 0	0 0 0	0 0 0	59 59 0	0 0 0
HNL-NAN																		
1/ 5/77 *	DDA	344 2	370 20	251 -15	FLT TOT: IN CLR: NOT CLR:	61 45 16	0 0 0	0 0 0	0 0 0	0 0 0	5.8 0.0 22.2	1.0 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	61 45 16	0 0 0
1/ 6/77	DDA	292 1	310 19	253 -16	FLT TOT: IN CLR: NOT CLR:	56 54 2	0 0 0	0 0 0	0 0 0	0 0 0	.8 0.0 22.5	.1 0.0 4.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	56 54 2	0 0 0
2/11/77 *	DDA	357 1	371 19	254 -15	FLT TOT: IN CLR: NOT CLR:	59 50 9	59 50 9	36 30 6	0 0 0	0 0 0	4.9 0.0 32.4	.5 0.0 3.4	.336E+05 .182E+02 .220E+06	32 35 18	0 0 0	0 0 0	59 50 9	0 0 0
2/12/77	DDA	336 1	350 19	220 -16	FLT TOT: IN CLR: NOT CLR:	59 55 4	59 55 4	37 35 2	0 0 0	0 0 0	1.8 0.0 27.1	.2 0.0 3.3	.984E+04 .977E+01 .145E+06	27 27 14	0 0 0	0 0 0	59 55 4	0 0 0
2/19/77 *	DDA	364 2	371 20	256 -15	FLT TOT: IN CLR: NOT CLR:	61 57 4	61 57 4	38 35 3	0 0 0	0 0 0	1.7 0.0 26.0	.3 0.0 4.0	.545E+04 .286E+01 .830E+05	24 24 25	0 0 0	0 0 0	0 0 0	0 0 0
2/20/77	DDA	345 1	350 19	248 -16	FLT TOT: IN CLR: NOT CLR:	60 54 6	60 54 6	38 34 4	0 0 0	0 0 0	.8 0.0 7.8	.2 0.0 1.5	.360E+04 .831E+01 .360E+05	22 23 16	0 0 0	0 0 0	0 0 0	0 0 0
6/ 1/79	BDB	344 1	370 19	203 -16	FLT TOT: IN CLR: NOT CLR:	63 51 12	63 51 12	41 34 7	19 16 3	0 0 0	5.4 0.0 28.5	1.0 0.0 5.4	.115E+06 .146E+04 .595E+06	41 43 31	56 52 77	129 122 167	63 51 12	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT			
						CLD	PD5	OZ	H20, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
	6/ 2/79	* BDB	354 2	370 20	263 -14	FLT IN NOT	TOT: CLR: CLR:	59 43 16	59 43 16	39 26 13	30 21 9	4 0 4	3.2 0.0 11.6	.6 0.0 2.1	.713E+05 .289E+04 .255E+06	50 55 39	55 41 89	121 100 169	59 43 16	0 0 0
	11/19/76	DDA	335 1	350 19	207 -16	FLT IN NOT	TOT: CLR: CLR:	64 64 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	64 64 0	0 0 0
	11/26/76	* DDA	343 2	370 20	246 -15	FLT IN NOT	TOT: CLR: CLR:	59 42 17	0 0 0	0 0 0	0 0 0	0 0 0	10.9 0.0 37.8	1.4 0.0 4.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	59 42 17	0 0 0
	11/27/76	DDA	330 1	350 19	258 -16	FLT IN NOT	TOT: CLR: CLR:	61 51 10	0 0 0	0 0 0	0 0 0	0 0 0	4.8 0.0 29.5	.5 0.0 3.2	0. 0. 0.	0 0 0	0 0 0	0 0 0	61 51 10	0 0 0
	11/14/79	* BBB	353 2	370 20	246 -15	FLT IN NOT	TOT: CLR: CLR:	59 55 4	59 55 4	39 36 3	31 28 3	0 0 0	.5 0.0 7.7	.1 0.0 1.5	.989E+01 .106E+02 0.	32 33 21	46 44 71	83 79 120	59 55 4	0 0 0
	12/ 2/76	* DDA	344 2	370 20	255 -15	FLT IN NOT	TOT: CLR: CLR:	62 43 19	0 0 0	0 0 0	0 0 0	0 0 0	9.5 0.0 31.1	1.0 0.0 3.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	62 43 19	0 0 0
	12/ 3/76	DDA	295 1	310 19	257 -16	FLT IN NOT	TOT: CLR: CLR:	63 50 13	0 0 0	0 0 0	0 0 0	0 0 0	5.3 0.0 25.8	.6 0.0 2.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	63 50 13	0 0 0
	12/13/76	* DDA	302 2	330 20	223 -15	FLT IN NOT	TOT: CLR: CLR:	63 50 13	0 0 0	0 0 0	0 0 0	0 0 0	4.8 0.0 23.4	1.0 0.0 5.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	12/14/76	DDA	337 1	350 19	249 -16	FLT IN NOT	TOT: CLR: CLR:	59 31 28	0 0 0	0 0 0	0 0 0	0 0 0	31.5 0.0 66.4	1.9 0.0 4.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	12/15/76	* DDA	336 2	370 20	250 -15	FLT IN NOT	TOT: CLR: CLR:	59 44 15	0 0 0	0 0 0	0 0 0	0 0 0	14.3 0.0 56.2	.7 0.0 2.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	12/16/76	DDA	298 1	310 19	238 -16	FLT IN NOT	TOT: CLR: CLR:	62 51 11	0 0 0	0 0 0	0 0 0	0 0 0	4.8 0.0 27.1	.8 0.0 4.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	12/23/76	* DDA	348 2	370 20	255 -15	FLT IN NOT	TOT: CLR: CLR:	59 44 15	0 0 0	0 0 0	0 0 0	0 0 0	9.7 0.0 38.3	1.2 0.0 4.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	59 44 15	0 0 0
	12/24/76	DDA	346 2	350 19	219 -16	FLT IN NOT	TOT: CLR: CLR:	63 41 22	0 0 0	0 0 0	0 0 0	0 0 0	19.5 0.0 55.8	1.6 0.0 4.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	63 41 22	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N		
						CLD	PD5	OZ	H2O	H2S	XTIC	PATCHES	PD5							
HNL-NAN (CONT.)																				
12/25/76	*	DDA	349 2	370 20	260 -15	FLT IN NOT	TOT: CLR: CLR:	63 45 18	0 0 0	0 0 0	0 0 0	12.6 0.0 44.0	1.2 0.0 4.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	63 45 18	0 0 0	
12/26/76		DDA	347 1	350 19	266 -16	FLT IN NOT	TOT: CLR: CLR:	59 49 10	0 0 0	0 0 0	0 0 0	8.1 0.0 48.0	.7 0.0 4.1	0. 0. 0.	0 0 0	0 0 0	0 0 0	59 49 10	0 0 0	
12/15/77		BCB	307 1	312 19	229 -16	FLT IN NOT	TOT: CLR: CLR:	54 46 8	54 46 8	32 28 4	0 0 0	6.1 0.0 41.3	0.0 0.0 0.0	.723E+05 .463E+01 .488E+06	29 30 21	0 0 0	0 0 0	54 46 8	0 0 0	
12/16/77	*	BCB	354 1	370 20	241 -15	FLT IN NOT	TOT: CLR: CLR:	61 44 17	61 44 17	39 29 10	0 0 0	7.8 0.0 27.8	0.0 0.0 0.0	.311E+05 .284E+01 .111E+06	29 32 20	0 0 0	0 0 0	61 44 17	0 0 0	
HNL-NRT																				
1/ 2/78	*	BCB	374 31	390 36	193 21	FLT IN NOT	TOT: CLR: CLR:	60 60 0	60 60 0	40 40 0	35 35 0	0 0 0	0.0 0.0 0.0	0. 0. 0.	65 65 0	23 23 0	37 37 0	0 0 0	0 0 0	
1/ 3/79		BBB	335 25	350 35	251 21	FLT IN NOT	TOT: CLR: CLR:	92 92 0	0 0 0	59 59 0	45 45 0	0 0 0	0.0 0.0 0.0	0. 0. 0.	44 44 0	26 26 0	124 124 0	92 92 0	0 0 0	
2/12/79		BBB	336 32	351 38	278 22	FLT IN NOT	TOT: CLR: CLR:	83 59 24	0 0 0	57 40 17	39 25 14	4 1 3	12.6 0.0 43.4	1.2 0.0 4.0	0. 0. 0.	156 193 69	55 37 87	65 70 55	61 37 24	22 22 0
2/20/79	*	BBB	359 32	370 36	254 22	FLT IN NOT	TOT: CLR: CLR:	21 21 0	0 0 0	12 12 0	11 11 0	1 1 0	0.0 0.0 0.0	0. 0. 0.	198 198 0	31 31 0	37 37 0	10 10 0	11 11 0	
2/21/79		BBB	339 32	351 36	251 22	FLT IN NOT	TOT: CLR: CLR:	95 60 35	0 0 0	63 40 23	49 33 16	0 0 0	11.1 0.0 30.2	2.1 0.0 5.6	0. 0. 0.	86 106 51	48 33 77	47 31 79	95 60 35	0 0 0
3/13/79		BBB	372 34	390 40	303 22	FLT IN NOT	TOT: CLR: CLR:	90 66 24	0 0 0	57 42 15	52 38 14	6 0 6	13.5 0.0 50.5	1.1 0.0 4.0	0. 0. 0.	283 365 54	45 28 91	49 42 68	35 11 24	55 55 0
3/13/79	*	BBB	368 31	370 36	292 22	FLT IN NOT	TOT: CLR: CLR:	64 44 20	0 0 0	42 29 13	37 25 12	3 0 3	13.5 0.0 43.1	1.2 0.0 3.7	0. 0. 0.	120 142 72	48 32 83	45 51 33	29 13 16	35 31 4
5/10/79		BDB	342 29	351 35	265 22	FLT IN NOT	TOT: CLR: CLR:	84 57 27	84 57 27	0 0 0	49 31 18	10 2 8	7.4 0.0 22.9	1.0 0.0 3.1	.160E+06 .851E+03 .496E+06	0 0 0	65 51 88	110 90 146	84 57 27	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT				TROP			STRAT	
						CLD	PD5	OZ	H2O, H2S			%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HNL-NRT (CONT.)																				
6/ 3/79		BDB	375 29	390 35	263 22	FLT IN NOT	TOT: CLR: CLR:	80 75 5	80 75 5	54 51 3	38 35 3	1 0 1	.2 0.0 2.7	.1 0.0 1.8	.269E+04 .969E+03 .285E+05	79 80 60	45 43 66	45 43 67	80 75 5	0 0 0
10/14/78	*	BBB	361 33	370 38	256 22	FLT IN NOT	TOT: CLR: CLR:	65 46 19	65 46 19	43 30 13	0 0 0	0 0 0	9.1 0.0 31.3	1.2 0.0 4.2	.473E+05 .906E+03 .160E+06	59 71 30	0 0 0	0 0 0	65 46 19	0 0 0
10/14/78		BBB	349 28	370 35	258 22	FLT IN NOT	TOT: CLR: CLR:	80 52 28	80 52 28	52 35 17	0 0 0	0 0 0	10.0 0.0 28.6	1.3 0.0 3.6	.157E+05 .217E+03 .444E+05	36 37 34	0 0 0	0 0 0	80 52 28	0 0 0
10/25/78	*	BBB	365 32	371 37	261 21	FLT IN NOT	TOT: CLR: CLR:	66 61 5	66 61 5	44 40 4	36 33 3	2 1 1	3.5 0.0 46.3	.4 0.0 5.0	.268E+05 .288E+02 .354E+06	61 61 54	49 46 85	30 29 44	66 61 5	0 0 0
10/29/78		BBB	351 31	351 35	349 28	FLT IN NOT	TOT: CLR: CLR:	52 32 20	52 32 20	28 18 10	29 15 14	9 0 9	8.1 0.0 21.1	1.0 0.0 2.7	.267E+05 .203E+02 .694E+05	35 31 42	76 59 93	103 86 121	52 32 20	0 0 0
11/ 6/78	*	BBB	345 33	354 38	261 22	FLT IN NOT	TOT: CLR: CLR:	57 45 12	57 45 12	35 28 7	32 26 6	7 2 5	3.6 0.0 17.0	.9 0.0 4.3	.258E+04 .243E+02 .122E+05	57 62 38	58 49 99	142 124 218	57 45 12	0 0 0
HNL-ORD																				
2/ 9/79	*	CAB	343 32	352 42	278 21	FLT IN NOT	TOT: CLR: CLR:	89 45 44	89 45 44	57 30 27	52 28 24	5 3 2	21.4 0.0 43.2	1.8 0.0 3.6	.566E+05 .305E+03 .114E+06	58 79 35	79 74 84	63 38 92	89 45 44	0 0 0
2/ 9/79		CAB	348 35	371 42	232 23	FLT IN NOT	TOT: CLR: CLR:	77 54 23	77 54 23	50 35 15	42 30 12	9 5 4	8.3 0.0 27.9	.7 0.0 2.4	.138E+05 .239E+03 .456E+05	87 112 29	78 73 90	59 33 124	65 42 23	12 12 0
2/15/79	*	CAB	341 38	351 43	278 25	FLT IN NOT	TOT: CLR: CLR:	92 89 3	92 89 3	60 58 2	54 54 0	7 7 0	.1 0.0 2.6	.1 0.0 1.7	.210E+03 .790E+02 .411E+04	185 189 79	69 69 0	45 45 0	53 50 3	39 39 0
2/16/79		CAB	326 33	370 41	263 22	FLT IN NOT	TOT: CLR: CLR:	76 76 0	76 76 0	48 48 0	41 41 0	2 2 0	0.0 0.0 0.0	0.0 0.0 0.0	.117E+03 .117E+03 0.	153 153 0	46 46 0	53 53 0	55 55 0	21 21 0
2/22/79	*	CAB	339 37	352 43	274 23	FLT IN NOT	TOT: CLR: CLR:	89 73 16	89 73 16	57 49 8	47 38 9	9 7 2	3.1 0.0 17.5	.8 0.0 4.4	.163E+05 .267E+03 .896E+05	159 173 71	78 77 85	52 49 64	66 50 16	23 23 0
3/ 2/76		CAA	329 35	335 42	204 22	FLT IN NOT	TOT: CLR: CLR:	49 34 15	0 0 0	49 34 15	48 34 14	25 11 14	14.4 0.0 47.0	.7 0.0 2.3	0. 0. 0.	113 147 36	75 65 100	99 100 96	36 21 15	13 13 0

DEP-ARR	MM/DD/YY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES										
HNL-ORD (CONT.)																						
3/ 4/76 *	CAA	347 36	390 43	204 22	FLT IN NOT	TOT: CLR: CLR:	62 47 15	0 0 0	62 47 15	60 46 14	30 16 14	10.8 0.0 44.8	.7 0.0 2.9	0. 0. 0.		140 166 56	74 66 100	46 39 69	43 28 15	19 19 0		
3/ 5/76 *	CAA	334 37	355 44	197 22	FLT IN NOT	TOT: CLR: CLR:	59 47 12	0 0 0	59 47 12	59 47 12	44 32 12	6.9 0.0 34.2	.7 0.0 3.4	0. 0. 0.		126 142 62	87 83 100	70 72 60	56 44 12	3 3 0		
3/ 5/76	CAA	343 35	370 42	204 22	FLT IN NOT	TOT: CLR: CLR:	53 39 14	0 0 0	53 39 14	52 38 14	27 13 14	5.5 0.0 20.7	.3 0.0 1.2	0. 0. 0.		218 280 45	62 48 100	69 41 142	30 16 14	23 23 0		
3/30/76	CAA	335 36	370 42	203 22	FLT IN NOT	TOT: CLR: CLR:	50 36 14	0 0 0	50 36 14	50 36 14	35 21 14	5.1 0.0 18.1	1.0 0.0 3.4	0. 0. 0.		253 319 84	75 65 100	93 73 144	33 19 14	17 17 0		
3/31/76 *	CAA	343 40	351 42	205 37	FLT IN NOT	TOT: CLR: CLR:	28 27 1	0 0 0	28 27 1	27 26 1	13 12 1	.1 0.0 2.7	.0 0.0 1.0	0. 0. 0.		226 232 80	68 67 100	42 42 42	15 14 1	13 13 0		
3/ 2/79 *	CAB	339 35	351 42	275 22	FLT IN NOT	TOT: CLR: CLR:	90 67 23	90 67 23	57 44 13	48 37 11	40 31 9	11.4 0.0 44.4	.7 0.0 2.6	.288E+05 .762E+02 .113E+06	85 97 43	99 99 100	101 109 77	85 62 23	5 5 0			
3/22/79 *	CAB	341 38	350 45	287 22	FLT IN NOT	TOT: CLR: CLR:	88 64 24	88 64 24	55 39 16	50 34 16	19 12 7	13.2 0.0 48.4	.7 0.0 2.5	.477E+05 .925E+03 .172E+06	187 238 62	88 87 91	64 62 66	56 32 24	32 32 0			
3/23/79	CAB	341 31	370 41	221 21	FLT IN NOT	TOT: CLR: CLR:	76 72 4	76 72 4	49 48 1	41 40 1	4 4 0	2.5 0.0 47.7	.2 0.0 3.0	.178E+05 .240E+03 .334E+06	186 189 31	62 61 98	99 99 71	32 28 4	44 44 0			
4/ 1/76	CAA	344 35	370 42	205 22	FLT IN NOT	TOT: CLR: CLR:	58 56 2	0 0 0	58 56 2	0 0 0	0 0 0	.0 0.0 .6	.0 0.0 1.0	0. 0. 0.		156 159 81	0 0 0	0 0 0	37 35 2	21 21 0		
4/ 7/76 *	CAA	341 39	351 45	213 26	FLT IN NOT	TOT: CLR: CLR:	56 46 10	0 0 0	56 46 10	0 0 0	0 0 0	4.1 0.0 23.2	.4 0.0 2.0	0. 0. 0.		193 219 70	0 0 0	0 0 0	49 39 10	7 7 0		
4/10/76	CAA	350 35	390 42	206 22	FLT IN NOT	TOT: CLR: CLR:	52 51 1	0 0 0	52 51 1	51 50 1	14 13 1	1.2 0.0 61.6	.0 0.0 2.0	0. 0. 0.		179 182 51	78 78 100	94 91 272	42 41 1	10 10 0		
4/10/76 *	CAA	314 44	350 45	205 42	FLT IN NOT	TOT: CLR: CLR:	17 15 2	0 0 0	17 15 2	17 15 2	8 6 2	1.2 0.0 10.0	.4 0.0 3.0	0. 0. 0.		124 131 75	90 89 100	170 165 205	17 15 2	0 0 0		
4/12/76	CAA	370 40	390 42	222 34	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	28 28 0	27 27 0	13 13 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.		246 246 0	74 74 0	59 59 0	8 8 0	20 20 0		

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT	
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
4/13/76	*	CAA	316 42	351 42	207 40	FLT IN NOT	TOT: CLR: CLR:	17 10 7	0 0 0	17 10 7	17 10 7	10 3 7	19.0 0.0 46.2	1.4 0.0 3.4	0. 0. 0.		179 241 91	80 66 100	135 142 127	14 7 7	3 3 0
4/14/76		CAA	323 27	330 32	204 22	FLT IN NOT	TOT: CLR: CLR:	27 21 6	0 0 0	27 21 6	26 20 6	16 10 6	1.7 0.0 7.8	.5 0.0 2.2	0. 0. 0.		68 71 57	84 80 100	185 180 203	27 21 6	0 0 0
4/19/76		CAA	335 31	370 39	210 22	FLT IN NOT	TOT: CLR: CLR:	37 33 4	0 0 0	37 33 4	36 32 4	28 24 4	1.3 0.0 12.1	.1 0.0 1.0	0. 0. 0.		104 108 72	92 91 100	160 161 152	35 31 4	2 2 0
4/20/76		CAA	340 32	370 40	208 22	FLT IN NOT	TOT: CLR: CLR:	40 34 6	0 0 0	40 34 6	40 34 6	35 29 6	1.3 0.0 8.7	.2 0.0 1.5	0. 0. 0.		85 84 89	97 96 100	147 147 152	40 34 6	0 0 0
4/21/76	*	CAA	364 41	391 43	206 35	FLT IN NOT	TOT: CLR: CLR:	43 30 13	0 0 0	43 30 13	42 29 13	22 9 13	9.6 0.0 31.9	.8 0.0 2.6	0. 0. 0.		228 285 98	73 61 100	35 31 46	32 20 12	11 10 1
4/26/76	*	CAA	341 35	351 43	187 22	FLT IN NOT	TOT: CLR: CLR:	60 50 10	0 0 0	60 50 10	60 50 10	8 1 7	5.7 0.0 34.3	.4 0.0 2.2	0. 0. 0.		220 247 87	57 49 98	57 51 85	53 43 10	7 7 0
4/ 4/79	*	CAB	387 35	410 42	235 22	FLT IN NOT	TOT: CLR: CLR:	96 89 7	96 89 7	63 58 5	55 52 3	30 28 2	1.0 0.0 13.7	.2 0.0 2.4	0. 0. 0.	.120E+05 .106E+04 .151E+06	214 223 108	86 86 90	23 23 19	56 50 6	40 39 1
4/ 6/79		CAB	345 31	390 42	215 23	FLT IN NOT	TOT: CLR: CLR:	47 47 0	44 44 0	31 31 0	21 21 0	10 10 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	.433E+04 .433E+04	121 121 0	86 86 0	49 49 0	45 45 0	2 2 0
5/ 7/76	*	CAA	340 35	350 42	208 22	FLT IN NOT	TOT: CLR: CLR:	89 88 1	0 0 0	48 48 0	0 0 0	0 0 0	.0 0.0 .8	.0 0.0 1.0	0. 0. 0.		58 58 0	0 0 0	0 0 0	89 88 1	0 0 0
5/ 9/76	*	CAA	345 35	350 42	207 22	FLT IN NOT	TOT: CLR: CLR:	85 71 14	0 0 0	25 21 4	0 0 0	0 0 0	1.9 0.0 11.3	.3 0.0 1.6	0. 0. 0.		117 117 120	0 0 0	0 0 0	85 71 14	0 0 0
5/13/76	*	CAA	367 32	390 42	205 21	FLT IN NOT	TOT: CLR: CLR:	90 85 5	0 0 0	49 46 3	73 70 3	23 20 3	1.0 0.0 18.6	.1 0.0 1.8	0. 0. 0.		129 134 46	76 75 100	53 51 100	90 85 5	0 0 0
5/14/76		CAA	342 35	370 43	207 22	FLT IN NOT	TOT: CLR: CLR:	83 62 21	0 0 0	37 25 12	0 0 0	0 0 0	5.4 0.0 21.3	.5 0.0 2.0	0. 0. 0.		105 132 50	0 0 0	0 0 0	83 62 21	0 0 0
5/15/76	*	CAA	339 34	351 42	214 22	FLT IN NOT	TOT: CLR: CLR:	88 62 26	0 0 0	30 25 5	73 50 23	56 33 23	13.1 0.0 44.4	1.0 0.0 3.5	0. 0. 0.		79 82 64	93 90 100	94 85 113	88 62 26	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT			TROP			STRAT
								CLD	PD5	OZ	H2O, H2S		%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HNL-ORD (CONT.)																				
5/30/79	*	CAB	368 35	390 42	192 22	FLT IN NOT	TOT: CLR: CLR:	87 80 7	87 80 7	0 0 0	48 44 4	5 4 1	2.8 0.0 34.6	.1 0.0 1.0	.919E+04 .332E+04 .762E+05	0 0 0	72 71 91	53 50 85	76 69 7	11 11 0
5/30/79		CAB	353 35	373 42	195 23	FLT IN NOT	TOT: CLR: CLR:	81 71 10	81 71 10	9 9 0	42 33 9	4 0 4	7.4 0.0 60.3	.3 0.0 2.2	.231E+05 .295E+04 .166E+06	90 90 0	59 51 91	83 43 231	68 58 10	13 13 0
5/31/79		CAB	361 34	370 42	217 22	FLT IN NOT	TOT: CLR: CLR:	83 80 3	83 80 3	0 0 0	46 43 3	2 1 1	1.6 0.0 45.1	.2 0.0 5.7	.545E+04 .271E+04 .783E+05	0 0 0	55 54 73	75 46 502	64 61 3	19 19 0
6/15/78		CAB	353 35	391 42	260 23	FLT IN NOT	TOT: CLR: CLR:	79 65 14	79 65 14	51 44 7	42 39 3	1 1 0	7.7 0.0 43.2	.4 0.0 2.3	.396E+05 .185E+04 .215E+06	82 80 94	59 59 52	52 52 51	75 62 13	4 3 1
6/18/78	*	CAB	341 38	361 45	266 22	FLT IN NOT	TOT: CLR: CLR:	85 81 4	85 81 4	50 48 2	45 43 2	6 4 2	1.4 0.0 30.5	.2 0.0 4.5	.882E+04 .138E+04 .159E+06	150 151 115	65 64 100	76 71 176	74 70 4	11 11 0
6/20/78	*	CAB	334 38	351 45	262 22	FLT IN NOT	TOT: CLR: CLR:	90 87 3	90 87 3	58 56 2	50 49 1	0 0 0	.4 0.0 10.7	.2 0.0 6.7	.516E+04 .922E+03 .128E+06	121 122 82	53 52 90	56 55 104	84 81 3	6 6 0
6/28/78		CAB	347 36	370 42	192 23	FLT IN NOT	TOT: CLR: CLR:	77 70 7	77 70 7	49 44 5	40 38 2	0 0 0	2.4 0.0 25.9	.3 0.0 3.3	.600E+04 .426E+03 .617E+05	134 143 53	29 26 87	33 31 83	68 61 7	9 9 0
6/ 3/79		CAB	371 31	404 41	253 21	FLT IN NOT	TOT: CLR: CLR:	82 79 3	82 79 3	0 0 0	42 41 1	0 0 0	1.4 0.0 37.6	.0 0.0 1.0	.432E+04 .310E+04 .364E+05	0 0 0	25 25 6	23 22 47	71 68 3	11 11 0
6/ 5/79	*	CAB	364 37	391 42	243 22	FLT IN NOT	TOT: CLR: CLR:	46 42 4	25 21 4	0 0 0	33 29 4	1 1 0	2.5 0.0 28.5	.1 0.0 1.3	.278E+05 .202E+04 .163E+06	0 0 0	58 56 68	45 36 112	46 42 4	0 0 0
6/ 6/79		CAB	358 38	370 44	264 23	FLT IN NOT	TOT: CLR: CLR:	78 68 10	78 68 10	0 0 0	45 39 6	0 0 0	3.4 0.0 26.2	.3 0.0 2.4	.112E+05 .297E+03 .850E+05	0 0 0	45 40 74	55 55 56	78 68 10	0 0 0
7/ 1/78	*	CAB	349 38	390 45	258 22	FLT IN NOT	TOT: CLR: CLR:	93 85 8	93 85 8	61 55 6	53 49 4	2 2 0	2.8 0.0 32.9	.5 0.0 5.6	.620E+04 .264E+03 .693E+05	219 235 72	32 34 3	29 31 13	74 66 8	19 19 0
7/ 2/78		CAB	343 32	370 41	240 21	FLT IN NOT	TOT: CLR: CLR:	75 74 1	75 74 1	49 49 0	36 35 1	0 0 0	.0 0.0 2.4	.0 0.0 2.0	.151E+02 .136E+02 .128E+03	46 46 0	11 9 85	20 18 109	75 74 1	0 0 0
7/ 6/78	*	CAB	338 37	351 43	197 22	FLT IN NOT	TOT: CLR: CLR:	90 67 23	90 67 23	58 44 14	52 40 12	4 0 4	9.0 0.0 35.2	.8 0.0 3.2	.256E+05 .214E+03 .996E+05	115 130 70	50 41 79	88 47 226	90 67 23	0 0 0

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS								NUMBER OF OBS			AVERAGES FOR THE FLIGHT						TROP	STRAT
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
HNL-ORD (CONT.)																						
7/ 8/78 *	CAB	338	351	193	FLT	TOT:	90	90	58	31	0	3.8	.3	.147E+05	101	45	126	90	0			
		37	44	22	IN	CLR:	83	83	54	31	0	0.0	0.0	.157E+03	101	45	126	83	0			
					NOT	CLR:	7	7	4	0	0	49.4	4.3	.187E+06	94	0	0	7	0			
7/15/78	CAB	347	371	209	FLT	TOT:	77	77	49	45	0	0.0	0.0	.540E+02	76	17	28	77	0			
		35	42	23	IN	CLR:	77	77	49	45	0	0.0	0.0	.540E+02	76	17	28	77	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
7/15/78 *	CAB	342	351	272	FLT	TOT:	89	89	57	48	11	1.5	.3	.135E+05	58	63	143	89	0			
		34	42	22	IN	CLR:	80	80	50	47	11	0.0	0.0	.727E+02	57	63	144	80	0			
					NOT	CLR:	9	9	7	1	0	14.8	3.0	.133E+06	67	70	116	9	0			
7/17/78 *	CAB	341	351	262	FLT	TOT:	91	91	56	49	0	.0	.0	.410E+02	67	24	84	91	0			
		31	41	21	IN	CLR:	89	89	54	48	0	0.0	0.0	.412E+02	66	23	83	89	0			
					NOT	CLR:	2	2	2	1	0	.8	1.0	.308E+02	104	64	135	2	0			
12/27/75 *	CAA	346	351	210	FLT	TOT:	57	0	57	0	0	12.2	1.4	0.	64	0	0	50	7			
		35	42	22	IN	CLR:	34	0	34	0	0	0.0	0.0	0.	79	0	0	28	6			
					NOT	CLR:	23	0	23	0	0	30.3	3.4	0.	41	0	0	22	1			
12/27/75	CAA	366	408	210	FLT	TOT:	53	0	53	0	0	8.8	.8	0.	66	0	0	48	5			
		34	42	22	IN	CLR:	37	0	37	0	0	0.0	0.0	0.	72	0	0	32	5			
					NOT	CLR:	16	0	16	0	0	29.3	2.7	0.	52	0	0	16	0			
HNL-OSA																						
1/ 3/79 *	BBB	345	350	271	FLT	TOT:	66	0	42	34	0	0.0	0.0	0.	61	19	47	66	0			
		31	35	22	IN	CLR:	66	0	42	34	0	0.0	0.0	0.	61	19	47	66	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
1/ 3/79	BBB	338	370	220	FLT	TOT:	95	0	60	50	0	0.0	0.0	0.	50	18	64	95	0			
		25	35	21	IN	CLR:	95	0	60	50	0	0.0	0.0	0.	50	18	64	95	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
2/11/79	BBB	374	391	284	FLT	TOT:	92	0	63	40	1	0.0	0.0	0.	274	29	42	32	60			
		32	37	22	IN	CLR:	92	0	63	40	1	0.0	0.0	0.	274	29	42	32	60			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
2/12/79 *	BBB	374	391	199	FLT	TOT:	66	0	42	36	1	.3	.1	0.	128	25	25	51	15			
		28	35	21	IN	CLR:	64	0	41	34	0	0.0	0.0	0.	130	22	24	49	15			
					NOT	CLR:	2	0	1	2	1	11.2	2.5	0.	51	34	49	2	0			
2/20/79	BBB	323	370	220	FLT	TOT:	15	0	6	6	3	0.0	0.0	0.	105	56	127	15	0			
		27	35	22	IN	CLR:	15	0	6	6	3	0.0	0.0	0.	105	56	127	15	0			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			
2/21/79 *	BBB	335	371	196	FLT	TOT:	8	0	3	1	1	0.0	0.0	0.	166	100	192	3	5			
		33	35	22	IN	CLR:	8	0	3	1	1	0.0	0.0	0.	166	100	192	3	5			
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0			

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT					TROP	STRAT
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HNL-OA (CONT.)																				
10/28/78	BBB	328 30	350 35	210 22	FLT	TOT:	87	87	58	45	4	20.3	1.6	.837E+05	57	59	110	87	0	
					IN	CLR:	41	41	29	20	1	0.0	0.0	.104E+03	71	42	68	41	0	
					NOT	CLR:	46	46	29	25	3	38.4	3.0	.158E+06	43	73	144	46	0	
10/28/78 *	BBB	366 33	390 39	262 22	FLT	TOT:	61	61	41	26	8	33.4	1.1	.930E+05	86	65	69	56	5	
					IN	CLR:	30	30	22	19	2	0.0	0.0	.273E+03	132	53	15	25	5	
					NOT	CLR:	31	31	19	7	6	65.6	2.3	.183E+06	38	99	215	31	0	
11/ 6/78	BBB	367 27	390 35	225 21	FLT	TOT:	77	77	51	40	0	0.0	0.0	.925E+01	45	31	49	77	0	
					IN	CLR:	77	77	51	40	0	0.0	0.0	.925E+01	45	31	49	77	0	
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0	
11/ 7/78 *	BBB	358 29	390 35	230 22	FLT	TOT:	76	76	50	42	7	5.1	.6	.133E+05	52	34	53	76	0	
					IN	CLR:	65	65	42	36	1	0.0	0.0	.203E+02	53	23	52	65	0	
					NOT	CLR:	11	11	8	6	6	35.1	4.2	.918E+05	47	100	56	11	0	
HNL-PDX																				
10/25/78	BBB	356 34	371 45	254 22	FLT	TOT:	50	50	33	24	1	.0	.0	.519E+01	73	41	47	50	0	
					IN	CLR:	49	49	32	23	1	0.0	0.0	.530E+01	73	40	47	49	0	
					NOT	CLR:	1	1	1	1	0	.4	1.0	0.	69	73	34	1	0	
10/26/78 *	BBB	330 35	350 45	247 23	FLT	TOT:	52	52	34	27	5	3.3	.2	.738E+04	54	48	86	52	0	
					IN	CLR:	48	48	32	25	3	0.0	0.0	.396E+01	55	44	82	48	0	
					NOT	CLR:	4	4	2	2	2	42.9	3.0	.959E+05	35	100	130	4	0	
10/27/78	BBB	361 35	370 45	230 22	FLT	TOT:	46	46	28	23	0	3.3	.6	.258E+04	56	38	29	46	0	
					IN	CLR:	40	40	26	23	0	0.0	0.0	.646E+01	56	38	29	40	0	
					NOT	CLR:	6	6	2	0	0	25.2	4.3	.197E+05	58	0	0	6	0	
10/27/78 *	BBB	357 33	391 45	205 22	FLT	TOT:	53	53	35	28	2	.8	.3	.517E+03	63	33	49	53	0	
					IN	CLR:	49	49	33	25	1	0.0	0.0	.406E+01	64	28	48	49	0	
					NOT	CLR:	4	4	2	3	1	10.9	3.5	.681E+04	50	81	58	4	0	
HNL-PPG																				
2/ 6/76	BBA	346 3	370 20	206 -12	FLT	TOT:	22	0	22	0	0	13.4	.9	0.	7	0	0	11	0	
					IN	CLR:	17	0	17	0	0	0.0	0.0	0.	7	0	0	6	0	
					NOT	CLR:	5	0	5	0	0	59.1	4.0	0.	8	0	0	5	0	
2/ 7/76 *	BBA	351 8	351 14	351 5	FLT	TOT:	5	0	5	0	0	17.3	.8	0.	41	0	0	5	0	
					IN	CLR:	4	0	4	0	0	0.0	0.0	0.	49	0	0	4	0	
					NOT	CLR:	1	0	1	0	0	86.7	4.0	0.	6	0	0	1	0	
3/29/77	AAA	386 4	389 20	315 -12	FLT	TOT:	50	50	0	40	15	8.8	1.2	.103E+06	0	69	56	0	0	
					IN	CLR:	29	29	0	24	3	0.0	0.0	.311E+02	0	52	36	0	0	
					NOT	CLR:	21	21	0	16	12	20.8	2.9	.245E+06	0	95	86	0	0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT			
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
HNL-PPG (CONT.)																				
3/29/77	*	AAA	404 3	410 20	234 -12	FLT IN NOT	TOT: CLR: CLR:	50 21 29	50 21 23	0 18 0	41 7 20	27	20.2 0.0 34.8	1.6 0.0 2.8	.688E+05 .121E+02 .119E+06	0 0 0	87 73 99	44 56 35	0 0 0	0 0 0
5/ 3/77	*	AAA	405 3	410 20	275 -12	FLT IN NOT	TOT: CLR: CLR:	51 40 11	51 40 11	32 26 6	0 0 0	0	5.9 0.0 27.4	.6 0.0 3.0	.140E+05 .207E+02 .650E+05	40 36 61	0 0 0	0 0 0	51 40 11	0 0 0
5/ 3/77		AAA	400 3	430 20	260 -12	FLT IN NOT	TOT: CLR: CLR:	52 30 22	52 30 22	30 16 14	0 0 0	0	22.6 0.0 53.5	1.0 0.0 2.5	.574E+05 .366E+03 .135E+06	37 42 32	0 0 0	0 0 0	52 30 22	0 0 0
5/10/77		AAA	398 4	410 20	313 -12	FLT IN NOT	TOT: CLR: CLR:	49 25 24	49 25 24	30 16 14	0 0 0	0	17.8 0.0 36.4	.9 0.0 1.9	.291E+05 .541E+03 .589E+05	29 35 23	0 0 0	0 0 0	49 25 24	0 0 0
5/10/77	*	AAA	408 3	430 20	290 -12	FLT IN NOT	TOT: CLR: CLR:	48 21 27	48 21 27	32 15 17	0 0 0	0	30.5 0.0 54.1	1.3 0.0 2.3	.125E+06 .908E+01 .223E+06	32 31 33	0 0 0	0 0 0	48 21 27	0 0 0
5/17/77	*	AAA	404 4	410 17	304 -12	FLT IN NOT	TOT: CLR: CLR:	16 4 12	16 4 12	10 2 8	0 0 0	0	37.1 0.0 49.5	1.4 0.0 1.8	.130E+06 .154E+02 .174E+06	19 40 13	0 0 0	0 0 0	16 4 12	0 0 0
5/17/77		AAA	398 4	410 19	382 -12	FLT IN NOT	TOT: CLR: CLR:	15 13 2	15 13 2	4 4 0	0 0 0	0	3.0 0.0 22.5	.5 0.0 3.5	.536E+05 .500E+01 .402E+06	37 37 0	0 0 0	0 0 0	15 13 2	0 0 0
5/14/79	*	BDB	366 4	370 20	287 -11	FLT IN NOT	TOT: CLR: CLR:	50 48 2	50 48 2	0 0 0	25 24 1	1	.2 0.0 4.7	.2 0.0 5.0	.258E+04 .271E+03 .580E+05	0 0 0	36 35 68	51 49 99	50 48 2	0 0 0
5/26/79		BDB	348 3	350 19	282 -12	FLT IN NOT	TOT: CLR: CLR:	50 27 23	50 27 23	31 18 13	24 13 11	7	15.7 0.0 34.1	1.7 0.0 3.6	.175E+06 .334E+04 .375E+06	25 27 23	73 56 93	195 128 274	50 27 23	0 0 0
10/23/78	*	BBB	365 4	369 20	295 -11	FLT IN NOT	TOT: CLR: CLR:	46 41 5	46 41 5	0 0 0	0 0 0	0	2.9 0.0 26.4	.2 0.0 2.0	.192E+04 .476E+01 .176E+05	0 0 0	0 0 0	0 0 0	46 41 5	0 0 0
11/ 4/78		B2B	345 3	350 19	248 -12	FLT IN NOT	TOT: CLR: CLR:	50 43 7	50 43 7	32 29 3	23 23 0	0	4.0 0.0 28.4	.4 0.0 2.9	.101E+05 .458E+03 .691E+05	42 43 30	23 23 0	47 47 0	50 43 7	0 0 0
12/14/76		AAA	410 3	430 20	294 -12	FLT IN NOT	TOT: CLR: CLR:	51 16 35	0 0 0	33 9 24	0 0 0	0	33.9 0.0 49.4	1.1 0.0 1.7	0. 0. 0.	23 23 23	0 0 0	0 0 0	51 16 35	0 0 0
12/15/76	*	AAA	409 3	431 20	256 -12	FLT IN NOT	TOT: CLR: CLR:	53 32 21	0 0 0	34 22 12	0 0 0	0	12.7 0.0 32.2	.8 0.0 2.0	0. 0. 0.	22 23 19	0 0 0	0 0 0	53 32 21	0 0 0

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS							AVERAGES FOR THE FLIGHT				TROP			STRAT
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HNL-PPG (CONT.)																			
12/21/76	* AAA	401	413	314	FLT	TOT:	44	0	26	0	0	1.2	.3	0.	40	0	0	44	0
		3	19	-12	IN	CLR:	39	0	23	0	0	0.0	0.0	0.	40	0	0	39	0
					NOT	CLR:	5	0	3	0	0	10.4	2.6	0.	45	0	0	5	0
12/21/76	AAA	403	410	196	FLT	TOT:	56	0	36	46	14	8.3	.7	0.	39	80	32	56	0
		3	20	-13	IN	CLR:	40	0	28	35	6	0.0	0.0	0.	37	75	30	40	0
					NOT	CLR:	16	0	8	11	8	29.1	2.5	0.	43	98	39	16	0
12/28/76	AAA	385	390	198	FLT	TOT:	54	0	35	0	0	0.0	0.0	0.	35	0	0	54	0
		3	20	-13	IN	CLR:	54	0	35	0	0	0.0	0.0	0.	35	0	0	54	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
12/28/76	* AAA	408	414	310	FLT	TOT:	46	0	30	38	12	9.6	1.4	0.	30	79	31	46	0
		3	19	-12	IN	CLR:	29	0	19	24	1	0.0	0.0	0.	32	68	29	29	0
					NOT	CLR:	17	0	11	14	11	26.0	3.8	0.	27	97	34	17	0
12/12/77	* BCB	373	390	256	FLT	TOT:	50	50	32	0	0	15.6	0.0	.170E+06	27	0	0	50	0
		4	20	-11	IN	CLR:	35	35	22	0	0	0.0	0.0	.426E+02	28	0	0	35	0
					NOT	CLR:	15	15	10	0	0	52.1	0.0	.567E+06	24	0	0	15	0
12/17/77	BCB	330	350	251	FLT	TOT:	43	43	26	0	0	14.3	0.0	.348E+05	26	0	0	43	0
		3	19	-12	IN	CLR:	24	24	15	0	0	0.0	0.0	.959E+02	28	0	0	24	0
					NOT	CLR:	19	19	11	0	0	32.4	0.0	.786E+05	23	0	0	19	0
HNL-SEA																			
2/13/79	CAB	364	371	201	FLT	TOT:	40	40	27	18	1	0.0	0.0	.462E+02	353	46	89	16	24
		34	47	23	IN	CLR:	40	40	27	18	1	0.0	0.0	.462E+02	353	46	89	16	24
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
3/30/76	BBA	366	371	222	FLT	TOT:	31	0	31	0	0	.1	.2	0.	296	0	0	31	0
		36	47	25	IN	CLR:	25	0	25	0	0	0.0	0.0	0.	329	0	0	25	0
					NOT	CLR:	6	0	6	0	0	.7	1.2	0.	161	0	0	6	0
3/30/76	* BBA	381	390	212	FLT	TOT:	32	0	32	0	0	3.0	.1	0.	143	0	0	20	12
		32	44	21	IN	CLR:	29	0	29	0	0	0.0	0.0	0.	150	0	0	19	10
					NOT	CLR:	3	0	3	0	0	32.4	1.0	0.	76	0	0	1	2
3/31/76	* BBA	349	352	320	FLT	TOT:	24	0	24	0	0	.1	.1	0.	108	0	0	18	6
		34	46	22	IN	CLR:	22	0	22	0	0	0.0	0.0	0.	109	0	0	18	4
					NOT	CLR:	2	0	2	0	0	1.0	1.5	0.	102	0	0	0	2
3/31/76	BBA	338	351	331	FLT	TOT:	27	0	27	0	0	.7	.8	0.	91	0	0	17	10
		39	46	29	IN	CLR:	23	0	23	0	0	0.0	0.0	0.	95	0	0	13	10
					NOT	CLR:	4	0	4	0	0	4.8	5.3	0.	69	0	0	4	0
4/ 1/76	* BBA	327	337	305	FLT	TOT:	35	0	35	0	0	.0	.1	0.	141	0	0	35	0
		36	46	22	IN	CLR:	32	0	32	0	0	0.0	0.0	0.	137	0	0	32	0
					NOT	CLR:	3	0	3	0	0	.4	1.0	0.	185	0	0	3	0

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HNL-SEA (CONT.)																			
4/ 1/76	BBA	312 35	334 46	290 23	FLT TOT:	33	0	33	0	0		.5	.4	0.	134	0	0	33	0
					IN CLR:	25	0	25	0	0		0.0	0.0	0.	140	0	0	25	0
					NOT CLR:	8	0	8	0	0		2.2	1.8	0.	114	0	0	8	0
4/ 2/76 *	BBA	378 34	390 46	291 22	FLT TOT:	35	0	35	0	0		.6	0.0	0.	134	0	0	27	8
					IN CLR:	34	0	34	0	0		0.0	0.0	0.	135	0	0	27	7
					NOT CLR:	1	0	1	0	0		22.4	0.0	0.	83	0	0	0	1
4/ 2/76	BBA	290 36	292 46	285 23	FLT TOT:	34	0	34	0	0		3.6	.8	0.	88	0	0	34	0
					IN CLR:	24	0	24	0	0		0.0	0.0	0.	96	0	0	24	0
					NOT CLR:	10	0	10	0	0		12.3	2.7	0.	68	0	0	10	0
4/ 3/76	BBA	361 37	371 47	209 23	FLT TOT:	32	0	32	0	0		2.3	.2	0.	93	0	0	24	8
					IN CLR:	27	0	27	0	0		0.0	0.0	0.	95	0	0	19	8
					NOT CLR:	5	0	5	0	0		14.4	1.4	0.	86	0	0	5	0
4/ 3/76 *	BBA	372 35	393 46	196 22	FLT TOT:	36	0	36	0	0		.0	.1	0.	273	0	0	32	4
					IN CLR:	35	0	35	0	0		0.0	0.0	0.	275	0	0	31	4
					NOT CLR:	1	0	1	0	0		.8	2.0	0.	181	0	0	1	0
12/12/77	BCB	367 35	390 47	263 23	FLT TOT:	45	45	30	0	0		3.0	0.0	.287E+04	59	0	0	39	6
					IN CLR:	42	42	28	0	0		0.0	0.0	.794E+02	59	0	0	36	6
					NOT CLR:	3	3	2	0	0		45.1	0.0	.420E+05	56	0	0	3	0
12/13/77 *	BCB	373 34	391 47	203 22	FLT TOT:	62	62	39	0	0		3.9	0.0	.250E+05	73	0	0	56	6
					IN CLR:	57	57	37	0	0		0.0	0.0	.839E+01	74	0	0	51	6
					NOT CLR:	5	5	2	0	0		48.3	0.0	.310E+06	52	0	0	5	0
HNL-SFO																			
1/26/76 *	CAA	343 30	351 37	217 22	FLT TOT:	30	0	30	30	3		3.4	.2	0.	40	46	55	30	0
					IN CLR:	28	0	28	28	1		0.0	0.0	0.	38	42	54	28	0
					NOT CLR:	2	0	2	2	2		51.4	3.5	0.	63	100	67	2	0
1/26/76	CAA	358 31	371 37	210 22	FLT TOT:	32	0	32	32	0		2.1	.7	0.	40	31	41	32	0
					IN CLR:	28	0	28	28	0		0.0	0.0	0.	39	28	36	28	0
					NOT CLR:	4	0	4	4	0		16.7	5.3	0.	51	55	76	4	0
1/28/76	CAA	359 30	371 37	210 22	FLT TOT:	30	0	30	30	0		1.0	.4	0.	66	24	30	30	0
					IN CLR:	27	0	27	27	0		0.0	0.0	0.	67	23	32	27	0
					NOT CLR:	3	0	3	3	0		9.8	3.7	0.	52	36	14	3	0
1/ 5/77	DDA	329 30	330 37	301 22	FLT TOT:	43	0	0	0	0		16.8	1.4	0.	0	0	0	43	0
					IN CLR:	26	0	0	0	0		0.0	0.0	0.	0	0	0	26	0
					NOT CLR:	17	0	0	0	0		42.4	3.5	0.	0	0	0	17	0
1/ 6/77 *	DDA	348 30	350 37	267 22	FLT TOT:	44	0	0	0	0		17.5	1.3	0.	0	0	0	44	0
					IN CLR:	27	0	0	0	0		0.0	0.0	0.	0	0	0	27	0
					NOT CLR:	17	0	0	0	0		45.4	3.2	0.	0	0	0	17	0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O, H2S		%TIC	PATCHES	PD5					
HNL-SFO (CONT.)																		
2/ 2/76	*	CAA	342 30	351 37	216 22	FLT TOT: IN CLR: NOT CLR:	36 36 0	0 0 0	36 30 0	15 15 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	83 83 0	63 63 0	49 49 0	36 36 0	0 0 0
2/ 2/76		CAA	358 30	370 37	218 22	FLT TOT: IN CLR: NOT CLR:	35 35 0	0 0 0	35 31 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	94 94 0	21 21 0	37 37 0	28 28 0	7 7 0
2/ 3/76	*	BBA	345 30	350 37	209 22	FLT TOT: IN CLR: NOT CLR:	33 33 0	0 0 0	33 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	75 75 0	0 0 0	0 0 0	33 33 0	0 0 0
2/10/76	*	CAA	342 31	351 38	211 22	FLT TOT: IN CLR: NOT CLR:	34 34 0	0 0 0	34 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	34 34 0	0 0 0	0 0 0	34 34 0	0 0 0
2/11/76		BBA	324 30	330 37	214 22	FLT TOT: IN CLR: NOT CLR:	31 26 5	0 0 0	31 26 5	0 0 0	2.6 0.0 16.3	.3 0.0 1.8	0. 0. 0.	32 32 34	0 0 0	0 0 0	31 26 5	0 0 0
2/26/76		CAA	364 29	370 35	214 22	FLT TOT: IN CLR: NOT CLR:	24 9 15	0 0 0	24 9 15	23 8 15	14.2 0.0 22.7	2.2 0.0 3.5	0. 0. 0.	44 46 43	100 100 100	31 29 32	24 9 15	0 0 0
2/26/76	*	CAA	375 30	390 37	209 23	FLT TOT: IN CLR: NOT CLR:	30 21 9	0 0 0	30 21 9	27 18 9	5.2 0.0 17.2	.8 0.0 2.6	0. 0. 0.	58 65 43	96 95 100	61 74 32	30 21 9	0 0 0
2/29/76		CAA	363 30	390 37	206 22	FLT TOT: IN CLR: NOT CLR:	27 25 2	0 0 0	27 25 2	14 12 2	5.9 0.0 80.0	.1 0.0 1.5	0. 0. 0.	150 156 69	76 76 100	116 114 135	13 11 2	14 14 0
2/11/77		DDA	368 30	371 36	295 22	FLT TOT: IN CLR: NOT CLR:	41 14 27	41 14 27	26 9 17	0 0 0	49.1 0.0 74.6	2.1 0.0 3.2	.244E+06 .706E+01 .371E+06	66 102 47	0 0 0	0 0 0	41 14 27	0 0 0
2/12/77	*	DDA	348 30	350 37	270 22	FLT TOT: IN CLR: NOT CLR:	51 23 28	51 23 28	33 13 20	0 0 0	34.4 0.0 62.7	2.3 0.0 4.1	.285E+06 .241E+02 .520E+06	55 81 39	0 0 0	0 0 0	51 23 28	0 0 0
2/19/77		DDA	380 30	390 36	269 22	FLT TOT: IN CLR: NOT CLR:	43 43 0	43 43 0	27 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.535E+01 .535E+01 0.	54 54 0	0 0 0	0 0 0	0 0 0	0 0 0
2/20/77	*	DDA	346 30	350 37	252 22	FLT TOT: IN CLR: NOT CLR:	49 48 1	49 48 1	15 15 0	0 0 0	1.0 0.0 47.5	.2 0.0 9.0	.121E+05 .251E+02 .593E+06	29 29 0	0 0 0	0 0 0	0 0 0	0 0 0
2/ 7/79	*	CAB	344 30	352 36	271 22	FLT TOT: IN CLR: NOT CLR:	52 22 30	52 22 30	33 15 18	4 1 3	17.3 0.0 29.9	2.6 0.0 4.5	.100E+06 .457E+03 .174E+06	49 56 44	82 77 86	94 105 84	52 22 30	0 0 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT	OZ	RH	H2O	TROP	STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N		
HNL-SFO (CONT.)																				
2/ 8/79	*	CAB	321 30	322 37	296 22	FLT IN NOT	TOT: CLR: CLR:	46 18 28	46 18 28	31 12 19	23 6 17	2 1 1	30.5 0.0 50.2	1.5 0.0 2.5	.487E+05 .923E+02 .799E+05	45 48 43	80 72 82	147 73 173	46 18 28	0 0 0
2/17/79		CAB	327 30	330 37	272 22	FLT IN NOT	TOT: CLR: CLR:	43 22 21	43 22 21	27 14 13	24 16 8	8 3 5	18.5 0.0 37.8	.9 0.0 1.9	.401E+05 .932E+03 .811E+05	57 55 58	78 69 96	118 149 57	43 22 21	0 0 0
2/18/79		CAB	365 30	371 37	292 22	FLT IN NOT	TOT: CLR: CLR:	40 9 31	40 9 31	23 3 20	14 5 9	9 3 6	10.1 0.0 13.0	2.5 0.0 3.2	.125E+05 .203E+04 .155E+05	33 47 31	92 96 91	42 46 40	40 9 31	0 0 0
2/18/79	*	CAB	354 30	360 37	194 22	FLT IN NOT	TOT: CLR: CLR:	49 27 22	49 27 22	31 17 14	27 13 14	11 4 7	18.2 0.0 40.5	1.2 0.0 2.6	.456E+05 .658E+03 .101E+06	33 43 21	90 92 88	141 40 235	49 27 22	0 0 0
2/19/79	*	CAB	358 31	360 37	295 22	FLT IN NOT	TOT: CLR: CLR:	60 33 27	60 33 27	39 22 17	34 19 15	10 2 8	19.8 0.0 44.1	.8 0.0 1.7	.372E+05 .436E+02 .826E+05	34 42 23	84 77 92	81 54 115	60 33 27	0 0 0
2/19/79		CAB	362 30	370 37	254 22	FLT IN NOT	TOT: CLR: CLR:	34 12 22	34 12 22	21 7 14	15 7 8	13 5 8	13.3 0.0 20.5	1.4 0.0 2.2	.303E+05 .914E+03 .464E+05	35 59 23	96 92 100	67 49 83	34 12 22	0 0 0
2/20/79	*	CAB	342 30	351 36	241 22	FLT IN NOT	TOT: CLR: CLR:	55 33 22	55 33 22	35 21 14	31 19 12	9 4 5	22.9 0.0 57.2	1.1 0.0 2.6	.532E+05 .110E+03 .133E+06	83 112 38	82 79 88	129 80 206	53 31 22	2 2 0
2/23/79		CAB	366 30	385 37	199 22	FLT IN NOT	TOT: CLR: CLR:	42 29 13	42 29 13	27 19 8	14 10 4	8 4 4	11.2 0.0 36.2	.8 0.0 2.5	.307E+05 .100E+03 .988E+05	99 105 84	94 78 100	124 162 30	42 29 13	0 0 0
2/27/79		CAB	357 30	360 37	299 22	FLT IN NOT	TOT: CLR: CLR:	45 45 0	45 45 0	28 28 0	24 24 0	6 6 0	0.0 0.0 0.0	0.0 0.0 0.0	.669E+02 .669E+02 0.	86 86 0	76 76 0	52 52 0	45 45 0	0 0 0
2/28/79	*	CAB	375 31	390 37	287 22	FLT IN NOT	TOT: CLR: CLR:	51 50 1	51 50 1	33 32 1	26 26 0	10 10 0	.0 0.0 1.6	.0 0.0 1.0	.320E+03 .322E+03 .252E+03	111 112 90	90 90 0	64 64 0	48 47 1	3 3 0
2/28/79		CAB	357 30	360 37	303 22	FLT IN NOT	TOT: CLR: CLR:	45 41 4	45 41 4	28 26 2	20 18 2	14 13 1	1.0 0.0 11.6	.2 0.0 2.3	.463E+03 .181E+03 .335E+04	98 100 71	95 98 65	58 61 27	45 41 4	0 0 0
3/ 1/76	*	CAA	343 30	350 37	210 22	FLT IN NOT	TOT: CLR: CLR:	36 26 10	0 0 0	36 26 10	36 26 10	32 22 10	13.3 0.0 47.7	.9 0.0 3.1	0. 0. 0.	103 128 38	99 99 100	102 88 138	34 24 10	2 2 0
3/28/76	*	BBA	343 29	351 37	250 22	FLT IN NOT	TOT: CLR: CLR:	30 26 4	0 0 0	30 26 4	0 0 0	0 0 0	1.1 0.0 8.3	.3 0.0 2.5	0. 0. 0.	95 39 71	0 0 0	0 0 0	30 26 4	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLC EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD3	OZ	H2O	H2S	%TIC	PATCHES	PD5						
HNL-SFO (CONT.)																			
3/	3/79	CAB	362 30	380 37	186 22	FLT TOT: IN CLR: NOT CLR:	49 49 0	49 49 0	30 30 0	28 28 0	12 12 0	0.0 0.0 0.0	0.0 0.0 0.0	.151E+03 .151E+03 0.	154 154 0	90 90 0	127 127 0	45 45 0	4 4 0
3/	5/79 *	CAB	364 28	370 36	209 21	FLT TOT: IN CLR: NOT CLR:	50 46 4	50 46 4	31 29 2	22 21 1	1 0 1	.8 0.0 10.2	.1 0.0 1.8	.105E+04 .252E+03 .102E+05	78 78 72	48 46 100	70 71 49	50 46 4	0 0 0
3/14/79		CAB	357 30	360 37	280 22	FLT TOT: IN CLR: NOT CLR:	43 38 5	43 38 5	26 24 2	21 21 0	8 8 0	2.3 0.0 19.6	.2 0.0 1.4	.274E+04 .105E+04 .156E+05	96 96 115	83 83 0	26 26 0	34 29 5	9 9 0
3/14/79 *		CAB	360 30	371 37	202 22	FLT TOT: IN CLR: NOT CLR:	49 29 20	49 29 20	29 16 13	24 17 7	21 15 6	12.6 0.0 30.9	1.4 0.0 3.4	.562E+05 .109E+04 .136E+06	126 166 78	97 97 99	45 47 40	34 16 18	15 13 2
3/19/79 *		CAB	355 34	370 37	308 23	FLT TOT: IN CLR: NOT CLR:	6 6 0	4 4 0	3 3 0	4 4 0	3 3 0	0.0 0.0 0.0	0.0 0.0 0.0	.104E+04 .104E+04 0.	187 187 0	87 87 0	112 112 0	3 3 0	3 3 0
3/30/79		CAB	368 30	381 37	201 22	FLT TOT: IN CLR: NOT CLR:	44 29 15	44 29 15	28 18 10	24 14 10	8 5 3	3.5 0.0 10.2	.6 0.0 1.9	.124E+05 .944E+03 .346E+05	92 109 61	84 78 93	59 83 24	43 28 15	1 1 0
4/	2/76 *	CAA	371 30	390 37	215 22	FLT TOT: IN CLR: NOT CLR:	34 28 6	0 0 0	34 28 6	33 27 6	23 17 6	4.4 0.0 24.8	.2 0.0 1.3	0. 0. 0.	187 203 109	90 88 100	52 60 15	34 28 6	0 0 0
4/11/76 *		CAA	349 30	350 37	317 22	FLT TOT: IN CLR: NOT CLR:	29 15 14	0 0 0	29 15 14	29 15 14	22 8 14	23.0 0.0 47.6	.8 0.0 1.6	0. 0. 0.	95 123 65	95 90 100	74 70 78	27 13 14	2 2 0
4/17/76 *		CAA	363 30	390 37	211 22	FLT TOT: IN CLR: NOT CLR:	30 30 0	0 0 0	30 30 0	4 4 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	36 36 0	100 100 0	424 424 0	30 30 0	0 0 0
4/22/76		CAA	359 32	370 37	210 22	FLT TOT: IN CLR: NOT CLR:	33 27 6	0 0 0	33 27 6	33 27 6	24 18 6	1.7 0.0 9.4	.2 0.0 1.3	0. 0. 0.	102 100 110	91 89 100	88 95 52	33 27 6	0 0 0
4/23/76 *		CAA	364 30	390 37	217 22	FLT TOT: IN CLR: NOT CLR:	31 29 2	0 0 0	31 29 2	31 29 2	14 12 2	.1 0.0 1.8	.1 0.0 1.5	0. 0. 0.	98 99 85	81 80 100	76 76 85	31 29 2	0 0 0
4/23/76		CAA	357 27	370 32	205 22	FLT TOT: IN CLR: NOT CLR:	18 16 2	0 0 0	18 16 2	18 16 2	13 11 2	1.5 0.0 13.7	.6 0.0 5.0	0. 0. 0.	108 108 110	89 87 100	69 72 49	18 16 2	0 0 0
4/27/76 *		BBA	344 30	352 37	213 22	FLT TOT: IN CLR: NOT CLR:	34 32 2	0 0 0	34 32 2	0 0 0	0 0 0	.7 0.0 11.8	.1 0.0 1.0	0. 0. 0.	120 122 94	0 0 0	0 0 0	34 32 2	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT	
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HNL-SFO (CONT.)																		
4/27/76	CAA	359 30	370 37	211 22	FLT TOT: IN CLR: NOT CLR:	29 29 0	0 0 0	29 29 0	28 28 0	13 13 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	134 134 0	86 86 0	61 61 0	29 29 0	0 0 0
5/28/76	* CAA	344 30	350 37	211 22	FLT TOT: IN CLR: NOT CLR:	48 45 3	0 0 0	29 27 2	0 0 0	0 0 0	.2 0.0 3.3	.1 0.0 2.3	0. 0. 0.	80 79 91	0 0 0	0 0 0	48 45 3	0 0 0
5/ 9/79	* BDB	329 30	331 37	275 22	FLT TOT: IN CLR: NOT CLR:	49 41 8	49 41 8	0 0 0	23 21 2	1 1 0	.8 0.0 5.0	.4 0.0 2.3	.115E+05 .132E+04 .636E+05	0 0 0	49 44 95	93 89 139	49 41 8	0 0 0
5/14/79	BDB	355 30	361 37	199 22	FLT TOT: IN CLR: NOT CLR:	49 46 3	49 46 3	0 0 0	25 25 0	0 0 0	.2 0.0 2.5	.1 0.0 1.7	.128E+05 .100E+05 .556E+05	0 0 0	63 63 0	42 42 0	49 46 3	0 0 0
5/15/79	* BDB	346 30	350 37	212 22	FLT TOT: IN CLR: NOT CLR:	46 44 2	46 44 2	0 0 0	24 23 1	0 0 0	.2 0.0 4.3	.2 0.0 3.5	.645E+04 .673E+04 .228E+03	0 0 0	59 58 62	68 69 44	46 44 2	0 0 0
5/16/79	BDB	339 30	341 37	299 22	FLT TOT: IN CLR: NOT CLR:	48 48 0	48 48 0	0 0 0	22 22 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.405E+04 .405E+04 0.	0 0 0	36 36 0	49 49 0	48 48 0	0 0 0
5/17/79	* BDB	326 30	331 37	234 22	FLT TOT: IN CLR: NOT CLR:	45 45 0	45 45 0	29 29 0	25 25 0	2 2 0	0.0 0.0 0.0	0.0 0.0 0.0	.404E+04 .404E+04 0.	100 100 0	35 35 0	75 75 0	45 45 0	0 0 0
5/29/79	* CAB	365 30	370 37	286 22	FLT TOT: IN CLR: NOT CLR:	43 37 6	43 37 6	26 22 4	23 19 4	0 0 0	2.5 0.0 17.6	.2 0.0 1.5	.835E+04 .170E+04 .494E+05	65 66 62	42 42 45	35 26 79	43 37 6	0 0 0
6/14/78	* CAB	359 31	360 37	315 22	FLT TOT: IN CLR: NOT CLR:	51 27 24	51 27 24	33 17 16	28 14 14	6 0 6	20.1 0.0 42.8	.7 0.0 1.6	.372E+05 .477E+04 .736E+05	71 62 80	81 78 84	60 52 68	51 27 24	0 0 0
6/16/78	CAB	368 30	373 37	292 22	FLT TOT: IN CLR: NOT CLR:	43 37 6	43 37 6	26 23 3	24 23 1	0 0 0	1.1 0.0 7.9	.2 0.0 1.7	.574E+04 .275E+04 .241E+05	242 262 83	69 68 96	48 47 75	43 37 6	0 0 0
6/17/78	* CAB	348 31	350 38	289 22	FLT TOT: IN CLR: NOT CLR:	48 47 1	48 47 1	31 30 1	28 27 1	9 8 1	.0 0.0 1.2	.1 0.0 3.0	.164E+04 .167E+04 .187E+03	172 177 34	69 68 100	80 77 173	48 47 1	0 0 0
6/17/78	CAB	365 30	370 36	285 22	FLT TOT: IN CLR: NOT CLR:	43 43 0	43 43 0	27 27 0	23 23 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.112E+04 .112E+04 0.	233 233 0	61 61 0	42 42 0	43 43 0	0 0 0
6/19/78	CAB	367 30	371 37	297 22	FLT TOT: IN CLR: NOT CLR:	43 41 2	43 41 2	28 27 1	24 23 1	3 2 1	.2 0.0 5.1	.1 0.0 1.5	.166E+04 .116E+04 .118E+05	104 106 69	78 77 100	47 47 54	43 41 2	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	OZ RH H2O			TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N
HNL-SFO (CONT.)																		
6/24/78	CAB	362	371	192	FLT TOT:	42	42	27	24	0	0.0	0.0	.157E+03	92	4	4	42	0
		30	37	22	IN CLR:	42	42	27	24	0	0.0	0.0	.157E+03	92	4	4	42	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
6/27/78 *	CAB	357	363	272	FLT TOT:	50	50	32	29	0	1.4	.2	.749E+03	93	37	59	50	0
		30	37	22	IN CLR:	46	46	31	29	0	0.0	0.0	.648E+03	94	37	59	46	0
					NOT CLR:	4	4	1	0	0	17.6	2.5	.191E+04	61	0	0	4	0
6/ 2/79 *	CAB	367	370	304	FLT TOT:	46	46	0	24	1	28.7	.1	.359E+05	0	40	27	46	0
		30	37	22	IN CLR:	23	23	0	12	1	0.0	0.0	.874E+04	0	45	29	23	0
					NOT CLR:	23	23	0	12	0	57.4	.2	.631E+05	0	36	25	23	0
6/ 7/79	CAB	356	360	291	FLT TOT:	43	43	0	23	1	2.7	.2	.666E+04	0	43	36	43	0
		30	37	22	IN CLR:	38	38	0	18	1	0.0	0.0	.405E+04	0	41	36	38	0
					NOT CLR:	5	5	0	5	0	23.5	2.0	.265E+05	0	49	35	5	0
6/ 8/79	CAB	365	381	287	FLT TOT:	42	42	0	21	0	0.0	0.0	.149E+04	0	60	40	42	0
		30	37	22	IN CLR:	42	42	0	21	0	0.0	0.0	.149E+04	0	60	40	42	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
6/ 8/79 *	CAB	366	371	297	FLT TOT:	50	50	0	28	1	.3	.1	.202E+04	0	34	25	50	0
		30	37	22	IN CLR:	47	47	0	26	0	0.0	0.0	.178E+04	0	30	22	47	0
					NOT CLR:	3	3	0	2	1	5.0	1.3	.576E+04	0	82	56	3	0
7/ 4/78	CAB	363	370	214	FLT TOT:	42	42	27	24	0	0.0	0.0	.638E+02	58	6	6	42	0
		30	37	22	IN CLR:	42	42	27	24	0	0.0	0.0	.638E+02	58	6	6	42	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
7/ 5/78 *	CAB	358	361	282	FLT TOT:	53	53	34	28	7	0.0	0.0	.704E+02	73	44	57	53	0
		30	37	22	IN CLR:	53	53	34	28	7	0.0	0.0	.704E+02	73	44	57	53	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
7/ 9/78	CAB	364	370	252	FLT TOT:	43	43	20	24	2	.2	.0	.109E+03	81	32	41	43	0
		32	38	23	IN CLR:	42	42	19	23	1	0.0	0.0	.100E+03	82	29	39	42	0
					NOT CLR:	1	1	1	1	1	8.6	1.0	.457E+03	57	100	81	1	0
7/ 9/78 *	CAB	364	390	254	FLT TOT:	50	50	32	27	0	0.0	0.0	.733E+02	63	30	48	50	0
		29	36	22	IN CLR:	50	50	32	27	0	0.0	0.0	.733E+02	63	30	48	50	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
7/10/78	CAB	369	390	295	FLT TOT:	44	44	27	24	0	0.0	0.0	.293E+02	69	17	20	44	0
		30	37	22	IN CLR:	44	44	27	24	0	0.0	0.0	.293E+02	69	17	20	44	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
7/14/78 *	CAB	358	361	290	FLT TOT:	52	52	33	31	0	0.0	0.0	.308E+02	72	23	26	52	0
		30	37	22	IN CLR:	52	52	33	31	0	0.0	0.0	.308E+02	72	23	26	52	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
7/16/78 *	CAB	356	361	241	FLT TOT:	51	51	24	30	0	0.0	0.0	.387E+02	72	30	43	51	0
		30	37	22	IN CLR:	51	51	24	30	0	0.0	0.0	.387E+02	72	30	43	51	0
					NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		TROP			STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
HNL-SFO (CONT.)																			
7/16/78	CAB	366 30	370 37	288 22	FLT IN NOT	TOT: CLR: CLR:	42 40 2	42 40 2	25 25 0	23 23 0	0	.0 0.0 .4	.0 0.0 1.0	.249E+02 .245E+02 .330E+02	65 65 0	35 35 0	34 34 0	42 40 2	0 0 0
7/21/78	CAB	363 30	370 37	200 22	FLT IN NOT	TOT: CLR: CLR:	46 45 1	46 45 1	29 29 0	26 26 0	0	.1 0.0 2.7	.0 0.0 1.0	.972E+01 .994E+01 0.	51 51 0	22 22 0	38 38 0	46 45 1	0 0 0
7/22/78 *	CAB	354 30	361 37	192 22	FLT IN NOT	TOT: CLR: CLR:	48 48 0	48 48 0	31 31 0	23 23 0	0	0.0 0.0 0.0	0.0 0.0 0.0	.244E+02 .244E+02 0.	50 50 0	24 24 0	37 37 0	48 48 0	0 0 0
11/19/76 *	DDA	348 30	350 37	271 22	FLT IN NOT	TOT: CLR: CLR:	47 47 0	0 0 0	0 0 0	0 0 0	0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	47 47 0	0 0 0
11/26/76	DDA	325 30	330 37	196 22	FLT IN NOT	TOT: CLR: CLR:	43 34 9	0 0 0	0 0 0	0 0 0	0	10.1 0.0 48.3	.7 0.0 3.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	43 34 9	0 0 0
11/27/76 *	DDA	347 30	350 37	271 22	FLT IN NOT	TOT: CLR: CLR:	44 29 15	0 0 0	0 0 0	0 0 0	0	12.4 0.0 36.5	.9 0.0 2.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	44 29 15	0 0 0
12/26/75 *	CAA	322 30	350 37	225 22	FLT IN NOT	TOT: CLR: CLR:	31 22 9	0 0 0	31 22 9	0 0 0	0	4.1 0.0 14.3	.7 0.0 2.6	0. 0. 0.	28 27 30	0 0 0	0 0 0	31 22 9	0 0 0
12/28/75	CAA	364 30	371 36	216 22	FLT IN NOT	TOT: CLR: CLR:	29 26 3	0 0 0	29 26 3	0 0 0	0	3.7 0.0 35.6	.2 0.0 2.0	0. 0. 0.	38 38 33	0 0 0	0 0 0	29 26 3	0 0 0
12/30/75 *	CAA	344 32	350 38	210 23	FLT IN NOT	TOT: CLR: CLR:	31 25 6	0 0 0	31 25 6	0 0 0	0	5.9 0.0 30.6	.5 0.0 2.8	0. 0. 0.	39 38 43	0 0 0	0 0 0	0 0 0	0 0 0
12/ 2/76	DDA	326 30	330 37	217 22	FLT IN NOT	TOT: CLR: CLR:	46 30 16	0 0 0	0 0 0	0 0 0	0	18.4 0.0 52.9	1.3 0.0 3.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	46 30 16	0 0 0
12/ 3/76 *	DDA	347 30	350 37	285 22	FLT IN NOT	TOT: CLR: CLR:	48 34 14	0 0 0	0 0 0	0 0 0	0	16.5 0.0 56.5	.9 0.0 3.1	0. 0. 0.	0 0 0	0 0 0	0 0 0	48 34 14	0 0 0
12/13/76	DDA	302 30	332 37	244 22	FLT IN NOT	TOT: CLR: CLR:	45 45 0	0 0 0	0 0 0	0 0 0	0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/14/76 *	DDA	357 30	360 37	271 22	FLT IN NOT	TOT: CLR: CLR:	49 49 0	0 0 0	0 0 0	0 0 0	0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
HNL-SFO (CONT.)																				
12/16/76	*	DDA	281 31	319 37	257 22	FLT TOT: IN CLR: NOT CLR:	47 42 5	0 0 0	0 0 0	0 0 0	0 0 0	5.5 0.0 52.0	.6 0.0 5.4	0. 0. 0.		0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/16/76		DDA	325 30	330 37	207 22	FLT TOT: IN CLR: NOT CLR:	39 31 8	0 0 0	0 0 0	0 0 0	0 0 0	7.5 0.0 36.6	1.3 0.0 6.5	0. 0. 0.		0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/23/76		DDA	327 30	330 37	259 22	FLT TOT: IN CLR: NOT CLR:	46 30 16	0 0 0	0 0 0	0 0 0	0 0 0	14.3 0.0 41.3	1.5 0.0 4.4	0. 0. 0.		0 0 0	0 0 0	0 0 0	46 30 16	0 0 0
12/24/76	*	DDA	346 30	350 37	254 22	FLT TOT: IN CLR: NOT CLR:	50 35 15	0 0 0	0 0 0	0 0 0	0 0 0	18.6 0.0 62.1	1.8 0.0 6.1	0. 0. 0.		0 0 0	0 0 0	0 0 0	50 35 15	0 0 0
12/25/76		DDA	329 30	330 37	269 22	FLT TOT: IN CLR: NOT CLR:	46 23 23	0 0 0	0 0 0	0 0 0	0 0 0	27.9 0.0 55.8	1.6 0.0 3.1	0. 0. 0.		0 0 0	0 0 0	0 0 0	46 23 23	0 0 0
12/26/76	*	DDA	348 30	350 36	275 22	FLT TOT: IN CLR: NOT CLR:	46 22 24	0 0 0	0 0 0	0 0 0	0 0 0	25.2 0.0 48.4	1.3 0.0 2.6	0. 0. 0.		0 0 0	0 0 0	0 0 0	46 22 24	0 0 0
12/28/78	*	BBB	348 30	361 37	219 22	FLT TOT: IN CLR: NOT CLR:	46 41 5	46 41 5	24 24 0	24 24 0	0 0 0	4.6 0.0 42.7	.5 0.0 4.8	.246E+05 .467E+01 .226E+06	102 102 0	17 17 0	37 37 0	0 0 0	0 0 0	0 0 0
12/29/78		BBB	334 31	341 37	219 22	FLT TOT: IN CLR: NOT CLR:	40 12 28	40 12 28	26 7 19	22 6 16	13 0 13	16.1 0.0 23.0	3.2 0.0 4.5	.472E+05 .155E+04 .667E+05	48 65 42	83 48 97	101 29 129	0 0 0	0 0 0	0 0 0
12/30/78	*	BBB	358 30	361 37	273 22	FLT TOT: IN CLR: NOT CLR:	57 32 25	57 32 25	37 23 14	35 19 16	14 4 10	15.0 0.0 34.3	2.2 0.0 4.9	.491E+05 .426E+03 .111E+06	35 37 32	78 65 93	71 79 62	0 0 0	0 0 0	0 0 0
12/31/79		BDB	362 29	391 37	227 22	FLT TOT: IN CLR: NOT CLR:	33 25 8	23 22 1	17 15 2	19 13 6	4 0 4	13.5 0.0 55.5	.8 0.0 3.3	.277E+01 .290E+01 0.	77 83 29	49 32 86	92 117 37	22 14 8	11 11 0	0
IAD-LHR																				
6/ 6/79	*	BDB	337 48	351 52	260 40	FLT TOT: IN CLR: NOT CLR:	79 55 23	79 56 23	50 36 14	37 28 9	6 4 2	7.5 0.0 25.8	1.1 0.0 3.8	.879E+05 .135E+05 .269E+06	148 177 73	71 64 93	72 64 99	71 48 23	8 8 0	0
6/ 7/79		BDB	348 49	370 53	285 40	FLT TOT: IN CLR: NOT CLR:	68 57 11	68 57 11	45 39 6	34 31 3	2 1 1	.8 0.0 4.7	.4 0.0 2.4	.187E+05 .431E+04 .934E+05	207 228 69	55 52 88	49 46 79	42 31 11	26 26 0	0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT				OZ			RH	H2O	TRCP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ								
IAD-LHR (CONT.)																						
9/10/76	BBA	346 49	349 53	252 40	FLT TOT: IN CLR: NOT CLR:	63 63 0	0 0 0	39 39 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	85 85 0	0 0 0	0 0 0	53 53 0		10 10 0			
9/13/76	BBA	332 49	340 52	253 40	FLT TOT: IN CLR: NOT CLR:	67 67 0	0 0 0	40 40 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	81 81 0	0 0 0	0 0 0	67 67 0		0 0 0			
9/13/76 *	BBA	369 51	390 54	272 40	FLT TOT: IN CLR: NOT CLR:	69 69 0	0 0 0	46 46 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	106 108 0	0 0 0	0 0 0	47 47 0		22 22 0			
9/17/76 *	BBA	341 53	370 58	254 40	FLT TOT: IN CLR: NOT CLR:	74 72 2	0 0 0	48 46 2	0 0 0	0 0 0	.0 0.0 .6	.0 0.0 1.0	0. 0. 0.	92 93 80	0 0 0	0 0 0	54 52 2		20 20 0			
9/24/76 *	BBA	358 48	369 52	267 40	FLT TOT: IN CLR: NOT CLR:	80 80 0	0 0 0	51 51 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	83 83 0	0 0 0	0 0 0	0 0 0		0 0 0			
9/24/76	BBA	351 49	390 53	249 40	FLT TOT: IN CLR: NOT CLR:	68 68 0	0 0 0	43 43 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	85 85 0	0 0 0	0 0 0	0 0 0		0 0 0			
9/30/78 *	BBB	322 47	370 52	255 41	FLT TOT: IN CLR: NOT CLR:	80 60 20	80 60 20	52 38 14	0 0 0	0 0 0	4.9 0.0 19.5	.8 0.0 3.0	.117E+05 .120E+03 .463E+05	67 72 54	0 0 0	0 0 0	80 60 20		0 0 0			
10/ 1/78	BBB	320 49	331 53	253 40	FLT TOT: IN CLR: NOT CLR:	68 58 10	68 58 10	44 37 7	0 0 0	0 0 0	4.4 0.0 29.9	.4 0.0 2.6	.252E+04 .295E+02 .170E+05	70 71 65	0 0 0	0 0 0	68 58 10		0 0 0			
10/ 6/78 *	BBB	337 49	392 52	239 40	FLT TOT: IN CLR: NOT CLR:	76 51 25	76 51 25	52 36 16	0 0 0	0 0 0	13.0 0.0 39.7	.9 0.0 2.6	.341E+05 .273E+03 .103E+06	82 92 61	0 0 0	0 0 0	74 49 25		2 2 0			
10/ 7/78 *	BBB	338 49	370 53	208 40	FLT TOT: IN CLR: NOT CLR:	75 60 15	75 60 15	48 37 11	0 0 0	0 0 0	7.9 0.0 39.6	.6 0.0 3.1	.576E+05 .711E+02 .288E+06	115 131 61	0 0 0	0 0 0	56 41 15		19 19 0			
10/ 7/78	BBB	338 49	350 53	256 40	FLT TOT: IN CLR: NOT CLR:	64 51 13	64 51 13	43 33 10	0 0 0	0 0 0	11.3 0.0 55.6	.6 0.0 2.8	.375E+05 .155E+03 .184E+06	106 120 59	0 0 0	0 0 0	51 38 13		13 13 0			
11/22/77 *	BCB	365 49	390 52	249 40	FLT TOT: IN CLR: NOT CLR:	75 31 44	75 31 44	50 20 30	0 0 0	0 0 0	19.3 0.0 33.0	0.0 0.0 0.0	.628E+05 .361E+03 .107E+06	105 149 75	0 0 0	0 0 0	61 17 44		14 14 0			
11/23/77	BCB	359 50	371 54	276 40	FLT TOT: IN CLR: NOT CLR:	61 40 21	61 40 21	41 26 15	0 0 0	0 0 0	17.9 0.0 52.1	0.0 0.0 0.0	.430E+05 .210E+02 .125E+06	102 134 46	0 0 0	0 0 0	41 20 21		20 20 0			

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		TROP			STRAT	
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N		
IAD-LHR (CONT.)																			
11/16/78 * BBB	308 55	310 61	262 40	FLT TOT: IN CLR: NOT CLR:	85 79 6	85 79 6	57 53 4	46 43 3	1 0 1	4.2 0.0 59.6	.3 0.0 3.7	.993E+04 .319E+02 .140E+06	148 156 34	37 34 85	28 21 132	50 44 6	35 35 0		
11/17/78 BBB	328 48	331 52	254 40	FLT TOT: IN CLR: NOT CLR:	62 43 19	62 43 19	40 29 11	33 23 10	10 0 10	18.9 0.0 61.7	.9 0.0 2.9	.877E+05 .119E+02 .206E+06	134 173 30	47 23 100	48 21 110	43 24 19	19 19 0		
12/15/78 * BBB	332 53	350 57	252 40	FLT TOT: IN CLR: NOT CLR:	77 60 17	77 60 17	50 39 11	40 33 7	6 0 6	14.5 0.0 65.6	.6 0.0 2.6	.723E+05 .132E+02 .327E+06	158 187 56	48 39 93	29 26 43	29 22 7	46 36 10		
12/16/78 BBB	316 49	330 53	257 40	FLT TOT: IN CLR: NOT CLR:	64 43 21	64 43 21	39 26 13	30 18 12	11 0 11	15.6 0.0 47.4	.6 0.0 1.8	.453E+05 .754E+01 .138E+06	92 112 53	63 39 99	42 28 62	0 0 0	0 0 0		
IAH-JFK																			
2/15/79 BBB	360 35	370 39	276 30	FLT TOT: IN CLR: NOT CLR:	22 6 16	0 0 0	16 6 10	12 5 7	0 0 0	25.8 0.0 35.5	2.2 0.0 3.1	0. 0. 0.	46 62 36	64 37 84	43 34 50	22 6 16	0 0 0		
2/15/79 * BBB	362 36	390 40	301 31	FLT TOT: IN CLR: NOT CLR:	28 26 2	0 0 0	17 16 1	16 15 1	1 0 1	4.2 0.0 59.2	.1 0.0 1.5	0. 0. 0.	70 69 99	28 23 100	26 21 103	23 22 1	5 4 1		
3/ 8/79 BBB	357 32	371 39	298 30	FLT TOT: IN CLR: NOT CLR:	8 8 0	0 0 0	3 3 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	122 122 0	0 0 0	0 0 0	1 1 0	7 7 0		
3/ 8/79 * BBB	363 38	390 40	232 31	FLT TOT: IN CLR: NOT CLR:	8 8 0	0 0 0	3 3 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	555 555 0	23 23 0	33 33 0	1 1 0	7 7 0		
5/28/79 * BDB	374 35	391 40	216 30	FLT TOT: IN CLR: NOT CLR:	30 15 15	30 15 15	19 8 11	10 9 1	0 0 0	26.2 0.0 52.4	3.4 0.0 6.8	.731E+06 .513E+04 .146E+07	195 292 125	50 49 54	24 25 18	19 5 14	11 10 1		
5/29/79 BDB	355 35	371 40	213 31	FLT TOT: IN CLR: NOT CLR:	25 13 12	25 13 12	15 9 6	0 0 0	0 0 0	17.2 0.0 35.8	2.5 0.0 5.2	.402E+06 .408E+04 .833E+06	154 178 118	0 0 0	0 0 0	25 13 12	0 0 0		
10/12/78 * BBB	379 36	391 40	231 31	FLT TOT: IN CLR: NOT CLR:	28 28 0	28 28 0	17 17 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.203E+03 .203E+03 0.	89 89 0	0 0 0	0 0 0	28 28 0	0 0 0		
10/16/78 * BBB	345 37	351 40	274 30	FLT TOT: IN CLR: NOT CLR:	30 29 1	30 29 1	18 17 1	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	.177E+02 .193E+02 0.	166 173 44	0 0 0	0 0 0	17 16 1	13 13 0		



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH H2O		TROP N	STRAT N
						CLD	PD5	OZ	H2O, H2S		%TIC	PATCHES	PD5							
IAH-JFK (CONT.)																				
10/17/78	BBB	359 35	371 39	237 30	FLT TOT: IN CLR: NOT CLR:	25 24 1	25 24 1	16 16 0	0 0 0		.1 0.0 2.7	.1 0.0 2.0	.159E+02 .165E+02 0.	92 92 0	0 0 0	0 0 0	22 21 1		3 3 0	
11/ 1/78	BBB	360 35	370 39	256 30	FLT TOT: IN CLR: NOT CLR:	26 26 0	26 26 0	17 17 0	12 12 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.249E+01 .249E+01 0.	151 151 0	26 26 0	38 38 0	26 26 0		0 0 0	
11/ 1/78 *	BBB	380 35	390 40	255 30	FLT TOT: IN CLR: NOT CLR:	27 27 0	27 27 0	17 17 0	14 14 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.974E+01 .974E+01 0.	76 76 0	35 35 0	21 21 0	27 27 0		0 0 0	
IAH-MEX																				
2/15/79	BBB	374 25	390 29	269 20	FLT TOT: IN CLR: NOT CLR:	15 12 3	0 0 0	1 0 1	8 6 2	1 1 0	7.2 0.0 36.1	1.0 0.0 5.0	0. 0. 0.	23 0 23	58 65 37	53 34 110	15 12 3		0 0 0	
2/15/79 *	BBB	389 25	410 29	302 21	FLT TOT: IN CLR: NOT CLR:	12 11 1	0 0 0	8 7 1	6 5 1	2 2 0	.5 0.0 5.9	.2 0.0 2.0	0. 0. 0.	84 89 47	47 55 12	52 56 33	12 11 1		0 0 0	
3/ 8/79	BBB	371 25	391 27	252 21	FLT TOT: IN CLR: NOT CLR:	7 6 1	0 0 0	3 3 0	3 3 0	1 1 0	.1 0.0 .4	.1 0.0 1.0	0. 0. 0.	156 156 0	71 71 0	48 48 0	6 5 1		1 1 0	
3/ 8/79 *	BBB	351 24	370 29	222 21	FLT TOT: IN CLR: NOT CLR:	8 8 0	0 0 0	3 3 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	62 62 0	49 49 0	88 88 0	8 8 0		0 0 0	
5/29/79 *	BDB	355 27	370 30	216 21	FLT TOT: IN CLR: NOT CLR:	19 19 0	19 19 0	10 10 0	7 7 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.508E+03 .508E+03 0.	68 68 0	39 39 0	40 40 0	19 19 0		0 0 0	
5/29/79	BDB	338 24	351 28	206 20	FLT TOT: IN CLR: NOT CLR:	13 12 1	13 12 1	9 8 1	5 4 1	0 0 0	.5 0.0 6.3	.4 0.0 5.0	.916E+02 .620E+02 .447E+03	50 50 47	28 32 13	137 72 394	13 12 1		0 0 0	
IAH-SFO																				
10/13/78	BBB	378 33	390 38	240 30	FLT TOT: IN CLR: NOT CLR:	35 35 0	33 35 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.170E+02 .170E+02 0.	74 74 0	0 0 0	0 0 0	35 35 0		0 0 0	
IST-KHI																				
4/19/76	BBA	344 35	371 40	212 26	FLT TOT: IN CLR: NOT CLR:	34 19 15	0 0 0	34 19 15	0 0 0	0 0 0	14.9 0.0 33.9	1.8 0.0 4.1	0. 0. 0.	170 168 174	0 0 0	0 0 0	32 18 14		2 1 1	

DEP-ARR	1M/1D/1Y	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N
IST-THR																				
1/24/76	*	BBA	297 38	310 41	215 36	FLT TOT: IN CLR: NOT CLR:	12 12 0	0 0 0	12 12 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	76 76 0	0 0 0	0 0 0	12 12 0	0 0 0
1/ 7/79	*	BBB	320 39	350 41	241 36	FLT TOT: IN CLR: NOT CLR:	30 28 2	0 0 0	19 19 0	18 18 0	1 1 0	0 0 0	.5 0.0 6.9	.2 0.0 3.0	0. 0. 0.	106 106 0	50 50 0	33 33 0	30 28 2	0 0 0
2/25/79	*	BBB	345 39	381 40	281 36	FLT TOT: IN CLR: NOT CLR:	25 25 0	0 0 0	16 16 0	14 14 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	277 277 0	22 22 0	19 19 0	16 16 0	9 9 0
3/20/76	*	BBA	334 39	351 40	212 36	FLT TOT: IN CLR: NOT CLR:	16 16 0	0 0 0	16 16 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	290 290 0	0 0 0	0 0 0	9 8 0	8 8 0
3/23/76		BBA	283 38	291 41	209 36	FLT TOT: IN CLR: NOT CLR:	16 16 0	0 0 0	16 16 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	82 82 0	0 0 0	0 0 0	16 16 0	0 0 0
3/16/79		BBB	289 38	291 40	247 36	FLT TOT: IN CLR: NOT CLR:	23 23 0	0 0 0	15 15 0	10 10 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	53 53 0	22 22 0	51 51 0	23 23 0	0 0 0
3/17/79	*	BBB	310 39	310 40	307 37	FLT TOT: IN CLR: NOT CLR:	24 18 6	0 0 0	0 0 0	13 11 2	0 0 0	0 0 0	5.9 0.0 23.8	.6 0.0 2.5	0. 0. 0.	0 0 0	38 36 51	52 50 65	24 18 6	0 0 0
11/22/78		BBB	340 39	370 40	230 36	FLT TOT: IN CLR: NOT CLR:	24 24 0	24 24 0	16 16 0	15 15 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.140E+02 .140E+02 0.	106 106 0	27 27 0	47 47 0	6 6 0	18 18 0
11/23/78	*	BBB	308 39	310 40	281 36	FLT TOT: IN CLR: NOT CLR:	25 25 0	25 25 0	17 17 0	13 13 0	1 1 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.105E+02 .105E+02 0.	64 64 0	32 32 0	29 29 0	25 25 0	0 0 0
11/25/78		BBB	314 38	329 40	250 36	FLT TOT: IN CLR: NOT CLR:	24 24 0	24 24 0	16 16 0	10 10 0	1 1 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.136E+02 .136E+02 0.	47 47 0	31 31 0	47 47 0	24 24 0	0 0 0
11/26/78	*	BBB	325 39	350 40	272 36	FLT TOT: IN CLR: NOT CLR:	22 22 0	22 22 0	14 14 0	10 10 0	1 1 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.120E+02 .120E+02 0.	77 77 0	40 40 0	24 24 0	22 22 0	0 0 0
11/28/78		BBB	350 38	370 40	234 36	FLT TOT: IN CLR: NOT CLR:	21 19 2	21 19 2	14 13 1	11 10 1	0 0 0	0 0 0	6.6 0.0 69.6	.8 0.0 8.5	.681E+05 .697E+01 .715E+06	131 136 59	23 20 57	11 8 39	21 19 2	0 0 0
11/29/78	*	BBB	339 39	352 41	199 36	FLT TOT: IN CLR: NOT CLR:	27 18 9	27 18 9	16 11 5	12 9 3	5 2 3	0 0 0	15.6 0.0 46.7	1.6 0.0 4.9	.517E+05 .336E+02 .155E+06	93 113 51	94 92 100	38 34 49	27 18 9	0 0 0

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT			
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N		
IST-THR (CONT.)																			
12/17/78	BBB	287 39	291 40	257 36	FLT IN NOT	TOT: CLR: CLR:	19 13 6	19 13 6	10 7 3	8 6 2	3 1 2	5.0 0.0 15.8	.9 0.0 3.0	.627E+04 .189E+04 .158E+05	43 49 30	75 67 100	170 139 264	0 0 0	0 0 0
12/18/78 *	BBB	346 39	351 40	277 36	FLT IN NOT	TOT: CLR: CLR:	26 17 9	26 17 9	14 10 4	15 9 6	4 0 4	10.2 0.0 29.6	1.8 0.0 5.2	.326E+05 .785E+01 .941E+05	60 62 54	64 51 83	29 25 34	0 0 0	0 0 0
12/20/78	BBB	346 38	371 40	216 36	FLT IN NOT	TOT: CLR: CLR:	22 22 0	22 22 0	14 14 0	12 12 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.615E+01 .615E+01 0.	84 84 0	58 58 0	63 63 0	0 0 0	0 0 0
12/23/78	BBB	324 38	331 40	258 36	FLT IN NOT	TOT: CLR: CLR:	22 18 4	22 18 4	0 0 0	9 9 0	0 0 0	3.5 0.0 19.4	.7 0.0 4.0	.315E+05 .409E+03 .171E+06	0 0 0	54 54 0	33 33 0	0 0 0	0 0 0
12/24/78 *	BBB	358 39	390 40	280 36	FLT IN NOT	TOT: CLR: CLR:	22 19 4	22 18 4	0 0 0	14 11 3	1 1 0	14.8 0.0 81.2	.6 0.0 3.5	.362E+05 0. .199E+06	0 0 0	49 45 64	25 26 22	0 0 0	0 0 0
ITO-LAX																			
2/12/76 *	CAA	340 28	350 34	212 21	FLT IN NOT	TOT: CLR: CLR:	26 24 2	0 0 0	26 24 2	0 0 0	0 0 0	.4 0.0 5.5	.2 0.0 2.0	0. 0. 0.	58 59 44	0 0 0	0 0 0	25 23 2	1 1 0
2/13/76	CAA	346 28	371 34	200 21	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	28 28 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	55 55 0	0 0 0	0 0 0	25 25 0	3 3 0
2/14/76 *	CAA	377 29	393 34	201 21	FLT IN NOT	TOT: CLR: CLR:	29 29 0	0 0 0	29 29 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	187 187 0	0 0 0	0 0 0	20 20 0	9 9 0
2/15/76	CAA	354 27	391 34	211 20	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	28 28 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	184 184 0	0 0 0	0 0 0	25 25 0	3 3 0
3/ 7/76 *	CAA	382 29	390 35	214 23	FLT IN NOT	TOT: CLR: CLR:	27 27 0	0 0 0	27 27 0	4 4 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	174 174 0	45 45 0	48 48 0	21 21 0	6 6 0
3/ 8/79	CAB	348 28	360 34	264 21	FLT IN NOT	TOT: CLR: CLR:	37 36 1	37 36 1	20 20 0	18 17 1	13 13 0	.3 0.0 11.0	.0 0.0 1.0	.126E+04 .142E+03 .415E+05	129 129 0	93 98 19	167 172 84	37 36 1	0 0 0
3/26/79	CAB	369 28	380 34	268 22	FLT IN NOT	TOT: CLR: CLR:	42 27 15	42 27 15	26 18 8	9 7 2	8 6 2	3.5 0.0 9.9	.9 0.0 2.5	.255E+05 .433E+03 .706E+05	109 143 33	99 99 100	82 54 184	20 8 12	22 19 3

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS							AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ						
ITC-LAX (CONT.)																			
3/29/79	CAB	370 28	381 34	244 22	FLT	TOT:	41	41	25	22	17	22.8	.8	.771E+05	126	95	45	32	9
					IN	CLR:	26	26	18	14	9	0.0	0.0	.190E+04	163	92	47	21	5
					NOT	CLR:	15	15	7	8	8	62.4	2.1	.207E+06	32	100	40	11	4
4/30/76 *	CAA	342 28	350 33	213 20	FLT	TOT:	43	0	28	35	28	4.9	.6	0.	114	96	129	43	0
					IN	CLR:	34	0	21	28	21	0.0	0.0	0.	116	95	103	34	0
					NOT	CLR:	9	0	7	7	7	23.6	2.9	0.	107	100	235	9	0
5/ 1/76	CAA	370 27	389 34	208 20	FLT	TOT:	40	0	24	33	26	12.6	.8	0.	115	96	74	40	0
					IN	CLR:	28	0	18	23	18	0.0	0.0	0.	122	94	61	28	0
					NOT	CLR:	12	0	6	10	10	41.9	2.5	0.	95	100	102	12	0
5/ 2/76 *	CAA	382 28	390 34	211 20	FLT	TOT:	51	0	16	42	30	11.8	.7	0.	175	86	64	51	0
					IN	CLR:	34	0	12	28	16	0.0	0.0	0.	206	78	60	34	0
					NOT	CLR:	17	0	4	14	14	35.5	2.2	0.	82	100	71	17	0
5/ 3/76	CAA	358 27	370 33	206 20	FLT	TOT:	49	0	32	40	30	4.1	.4	0.	140	86	61	49	0
					IN	CLR:	41	0	29	35	25	0.0	0.0	0.	148	84	83	41	0
					NOT	CLR:	8	0	3	5	5	25.3	2.8	0.	65	100	63	8	0
6/23/78	CAB	366 28	371 34	283 22	FLT	TOT:	44	44	27	24	0	.3	.1	.572E+02	89	52	42	44	0
					IN	CLR:	41	41	25	22	0	0.0	0.0	.521E+02	92	52	38	41	0
					NOT	CLR:	3	3	2	2	0	4.7	1.0	.126E+03	54	58	85	3	0
7/20/78	CAB	347 28	371 34	194 22	FLT	TOT:	46	46	30	26	0	0.0	0.0	.136E+02	58	3	8	46	0
					IN	CLR:	46	46	30	26	0	0.0	0.0	.136E+02	58	3	8	46	0
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
ITC-ORD																			
2/ 7/76	CAA	355 31	371 41	204 20	FLT	TOT:	61	0	61	0	0	2.2	.3	0.	153	0	0	27	34
					IN	CLR:	55	0	55	0	0	0.0	0.0	0.	167	0	0	21	34
					NOT	CLR:	6	0	6	0	0	22.0	3.2	0.	23	0	0	6	0
5/ 8/76	CAA	354 33	370 41	206 21	FLT	TOT:	79	0	32	0	0	1.5	.3	0.	94	0	0	79	0
					IN	CLR:	70	0	26	0	0	0.0	0.0	0.	98	0	0	70	0
					NOT	CLR:	9	0	6	0	0	13.2	2.4	0.	76	0	0	9	0
6/21/78	CAB	358 34	390 43	268 22	FLT	TOT:	75	75	49	41	0	0.0	0.0	.355E+03	107	53	50	69	6
					IN	CLR:	75	75	49	41	0	0.0	0.0	.355E+03	107	53	50	69	6
					NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
6/29/78	CAB	347 33	371 41	234 22	FLT	TOT:	79	79	51	44	1	1.8	.2	.796E+04	73	41	65	79	0
					IN	CLR:	74	74	49	43	1	0.0	0.0	.213E+03	73	40	65	74	0
					NOT	CLR:	5	5	2	1	0	29.0	3.0	.123E+06	77	76	76	5	0
7/ 3/78	CAB	347 33	371 41	216 22	FLT	TOT:	77	77	50	45	8	.2	.1	.901E+02	67	44	84	77	0
					IN	CLR:	74	74	49	44	7	0.0	0.0	.801E+02	68	43	81	74	0
					NOT	CLR:	3	3	1	1	1	5.2	1.3	.337E+03	19	100	208	3	0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ			RH		H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
ITO-ORD (CONT.)																						
	7/18/78	CAB	347 35	371 41	252 23	FLT IN NOT	TOT: CLR: CLR:	79 72 7	79 72 7	51 47 4	45 41 4	11 11 0	2.8 0.0 31.6	.2 0.0 2.0	.562E+04 .297E+02 .631E+05	68 66 93	54 63 77	144 150 82	79 72 7		0 0 0	
JFK-JFK																						
	4/ 6/77	AAA	383 45	431 48	255 42	FLT IN NOT	TOT: CLR: CLR:	19 19 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.		0 0 0	0 0 0	0 0 0	4 4 0	15 15 0	
JFK-LAS																						
	2/12/79	CAB	364 39	391 40	204 36	FLT IN NOT	TOT: CLR: CLR:	52 35 17	52 35 17	34 23 11	29 19 10	8 2 6	19.0 0.0 59.2	.7 0.0 2.0	.779E+05 .434E+02 .238E+06	144 136 58	82 78 89	75 26 170	34 18 16		18 17 1	
JFK-LAX																						
	1/31/76	* CAA	362 40	370 42	208 35	FLT IN NOT	TOT: CLR: CLR:	36 21 15	0 0 0	36 21 15	31 18 13	21 8 13	25.2 0.0 60.5	.9 0.0 2.3	0. 0. 0.		157 246 33	79 64 100	34 43 20	21 6 15	15 15 0	
	2/ 3/76	*-CAA	355 40	370 42	200 34	FLT IN NOT	TOT: CLR: CLR:	34 31 3	0 0 0	34 31 3	28 25 3	17 15 2	1.5 0.0 16.7	.3 0.0 3.7	0. 0. 0.		118 122 81	36 86 83	48 42 103	21 19 2	13 12 1	
	2/ 4/76	CAA	368 37	390 40	211 34	FLT IN NOT	TOT: CLR: CLR:	42 37 5	0 0 0	42 37 5	37 33 4	21 17 4	1.1 0.0 9.3	.2 0.0 1.4	0. 0. 0.		113 119 65	69 65 100	41 42 39	25 20 5	17 17 0	
	2/24/76	* CAA	380 39	410 42	214 34	FLT IN NOT	TOT: CLR: CLR:	31 30 1	0 0 0	31 30 1	30 29 1	15 14 1	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.		152 157 0	87 87 100	74 75 43	5 4 1	26 26 0	
	2/25/76	CAA	374 39	390 41	208 34	FLT IN NOT	TOT: CLR: CLR:	36 35 1	0 0 0	36 35 1	33 32 1	26 25 1	.0 0.0 1.2	.0 0.0 1.0	0. 0. 0.		180 184 39	96 96 100	45 46 21	14 13 1	22 22 0	
	2/28/76	CAA	359 38	390 40	213 34	FLT IN NOT	TOT: CLR: CLR:	37 28 9	0 0 0	37 28 9	37 29 9	31 22 9	4.2 0.0 17.4	.5 0.0 2.0	0. 0. 0.		75 79 63	97 96 100	64 75 31	37 28 9	0 0 0	
	2/ 8/79	* CAB	332 37	371 41	195 35	FLT IN NOT	TOT: CLR: CLR:	9 3 6	9 3 6	4 1 3	2 1 1	0 0 0	11.3 0.0 17.0	1.3 0.0 2.0	.193E+05 .110E+04 .284E+05	47 46 47	79 82 73	194 366 23	9 3 6		0 0 0	
	2/10/79	* CAB	368 40	372 42	298 35	FLT IN NOT	TOT: CLR: CLR:	47 35 12	47 35 12	30 24 6	25 20 5	11 8 3	4.5 0.0 17.8	.6 0.0 2.3	.133E+05 .336E+03 .512E+05	197 226 80	85 82 99	55 63 22	21 12 9		26 23 3	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT		OZ		RH	H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5		OZ				
JFK-LAX (CONT.)																					
2/11/79	*	CAB	364 40	370 42	199 35	FLT TOT:	43	43	29	21	5		9.1	.4	.201E+05	190	83	43	19	24	
						IN CLR:	33	33	23	17	4		0.0	0.0	.307E+03	215	81	47	9	24	
						NOT CLR:	10	10	6	4	1		39.0	1.9	.856E+05	94	90	29	10	0	
2/16/79		CAB	356 38	391 40	282 34	FLT TOT:	59	59	39	33	1		.0	.0	.330E+03	209	57	40	24	35	
						IN CLR:	58	58	39	33	1		0.0	0.0	.602E+02	209	57	40	23	35	
						NOT CLR:	1	1	0	0	0		2.4	1.0	.160E+05	0	0	0	1	0	
2/21/79	*	CAB	369 37	391 39	264 34	FLT TOT:	43	43	27	14	14		19.4	1.4	.510E+05	108	100	33	32	11	
						IN CLR:	25	25	15	4	4		0.0	0.0	.868E+02	151	100	32	15	10	
						NOT CLR:	18	18	12	10	10		46.4	3.3	.122E+06	56	100	33	17	1	
2/24/79	*	CAB	345 38	370 42	235 34	FLT TOT:	44	44	29	22	7		18.7	.8	.588E+05	204	91	97	30	14	
						IN CLR:	30	30	20	17	5		0.0	0.0	.126E+04	264	90	47	16	14	
						NOT CLR:	14	14	9	5	2		58.9	2.4	.182E+06	72	92	267	14	0	
2/25/79		CAB	350 39	390 42	308 35	FLT TOT:	53	53	30	22	11		20.7	1.3	.538E+05	216	91	72	38	15	
						IN CLR:	32	32	19	12	5		0.0	0.0	.118E+04	306	87	62	17	15	
						NOT CLR:	21	21	11	10	6		52.3	3.2	.134E+06	60	96	83	21	0	
2/28/79		CAB	385 39	391 41	268 35	FLT TOT:	52	52	34	30	18		1.9	.2	.985E+03	337	94	50	3	49	
						IN CLR:	48	48	31	27	15		0.0	0.0	.725E+02	358	94	50	1	47	
						NOT CLR:	4	4	3	3	3		24.1	2.5	.119E+05	120	100	47	2	2	
3/ 6/79	*	CAB	335 38	371 40	212 34	FLT TOT:	37	37	25	19	13		10.8	.4	.148E+05	178	91	66	27	10	
						IN CLR:	29	29	18	12	9		0.0	0.0	.166E+03	224	93	71	19	10	
						NOT CLR:	8	8	7	7	4		49.8	2.0	.679E+05	59	87	56	8	0	
3/ 8/79	*	CAB	367 36	410 41	194 34	FLT TOT:	42	42	28	19	10		0.0	0.0	.127E+03	317	89	79	25	17	
						IN CLR:	42	42	28	19	10		0.0	0.0	.127E+03	317	89	79	25	17	
						NOT CLR:	0	0	0	0	0		0.0	0.0	0.	0	0	0	0	0	
3/ 9/79		CAB	356 39	371 41	264 35	FLT TOT:	47	47	29	27	10		3.4	.1	.116E+05	327	69	35	10	37	
						IN CLR:	42	42	27	24	7		0.0	0.0	.575E+03	344	65	35	7	35	
						NOT CLR:	5	5	2	3	3		32.4	1.4	.104E+06	110	100	36	3	2	
3/ 9/79	*	CAB	389 37	410 39	281 34	FLT TOT:	41	41	27	22	6		.9	.1	.524E+02	421	58	70	16	25	
						IN CLR:	39	39	26	21	6		0.0	0.0	.535E+02	434	60	73	14	25	
						NOT CLR:	2	2	1	1	0		18.0	2.0	.311E+02	87	11	15	2	0	
3/10/79		CAB	333 40	368 41	230 34	FLT TOT:	9	9	4	1	1		10.5	1.4	.203E+05	213	100	41	4	5	
						IN CLR:	5	5	3	1	1		0.0	0.0	.184E+04	236	100	41	0	5	
						NOT CLR:	4	4	1	0	0		23.7	3.3	.434E+05	144	0	0	4	0	
3/15/79	*	CAB	366 36	371 39	302 34	FLT TOT:	42	42	26	21	1		.1	.0	.265E+03	225	61	49	0	0	
						IN CLR:	41	41	26	21	1		0.0	0.0	.122E+03	225	61	49	0	0	
						NOT CLR:	1	1	0	0	0		5.1	2.0	.614E+04	0	0	0	0	0	
3/17/79	*	CAB	379 40	411 42	283 35	FLT TOT:	41	41	26	22	12		23.2	1.2	.738E+05	299	81	32	14	27	
						IN CLR:	26	26	17	14	5		0.0	0.0	.501E+03	395	73	36	3	23	
						NOT CLR:	15	15	9	8	7		63.3	3.3	.201E+06	117	94	24	11	4	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT		PD5			QZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	QZ	H2O	H2S	XTIC	PATCHES								
3/23/79		CAB	377 39	391 41	202 34	FLT IN NOT	TOT: CLR: CLR:	53 45 8	53 45 8	34 28 6	30 27 3	6 4 2	8.1 0.0 53.5	.3 0.0 2.1	.171E+05 .169E+03 .112E+06	345 391 131	76 76 79	102 108 48	12 4 8	41 41 0
3/24/79	*	CAB	365 35	370 39	268 32	FLT IN NOT	TOT: CLR: CLR:	46 45 1	46 45 1	30 29 1	26 25 1	1 1 0	.9 0.0 41.2	.0 0.0 2.0	.156E+03 .155E+03 .190E+03	324 335 20	67 69 25	157 160 89	3 2 1	43 43 0
3/24/79		CAB	383 39	391 41	252 34	FLT IN NOT	TOT: CLR: CLR:	51 51 0	51 51 0	33 33 0	28 28 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.149E+03 .149E+03 0.	422 422 0	68 68 0	93 93 0	2 2 0	49 49 0
3/26/79		CAB	374 38	391 40	238 34	FLT IN NOT	TOT: CLR: CLR:	57 57 0	57 57 0	37 37 0	32 32 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.422E+03 .422E+03 0.	257 257 0	64 64 0	28 28 0	7 7 0	50 50 0
3/27/79	*	CAB	366 40	371 42	236 35	FLT IN NOT	TOT: CLR: CLR:	43 31 12	43 31 12	25 18 7	13 10 3	6 3 3	15.6 0.0 56.0	1.0 0.0 3.7	.774E+05 .728E+03 .276E+06	214 268 76	74 66 100	43 42 49	17 8 9	26 23 3
3/28/79		CAB	380 38	391 40	201 34	FLT IN NOT	TOT: CLR: CLR:	59 44 15	59 44 15	38 28 10	32 23 9	12 6 6	18.7 0.0 73.4	.7 0.0 2.9	.756E+05 .549E+03 .296E+06	258 302 133	79 72 97	27 30 19	17 12 5	42 32 10
5/12/76	*	CAA	382 41	410 43	188 34	FLT IN NOT	TOT: CLR: CLR:	49 46 3	0 0 0	31 28 3	0 0 0	0 0 0	1.5 0.0 24.4	.0 0.0 .7	0. 0. 0.	299 307 230	0 0 0	0 0 0	18 15 3	31 31 0
5/16/76		CAA	372 39	390 42	206 35	FLT IN NOT	TOT: CLR: CLR:	48 47 1	0 0 0	30 29 1	39 38 1	3 2 1	1.0 0.0 49.4	.1 0.0 3.0	0. 0. 0.	265 271 94	31 29 100	74 73 131	27 26 1	21 21 0
5/12/79		BDB	363 37	391 40	233 34	FLT IN NOT	TOT: CLR: CLR:	55 52 3	55 52 3	0 0 0	29 26 3	2 0 2	.8 0.0 15.6	.2 0.0 4.3	.273E+05 .325E+03 .495E+06	0 0 0	34 27 97	45 33 144	21 18 3	34 34 0
5/27/79	*	BDB	357 37	370 39	236 34	FLT IN NOT	TOT: CLR: CLR:	48 47 1	48 47 1	30 30 0	24 24 0	4 4 0	.5 0.0 22.4	.2 0.0 10.0	.317E+04 .323E+04 .114E+03	233 233 0	49 49 0	50 50 0	30 29 1	18 18 0
6/17/78		CAB	391 37	420 40	241 34	FLT IN NOT	TOT: CLR: CLR:	54 39 15	54 39 15	34 25 9	29 21 8	7 2 5	9.3 0.0 33.3	.3 0.0 2.9	.173E+05 .315E+03 .614E+05	55 54 56	81 76 96	44 42 47	54 39 15	0 0 0
6/23/78	*	CAB	379 36	410 39	271 34	FLT IN NOT	TOT: CLR: CLR:	46 33 13	46 33 13	30 22 8	19 16 3	8 5 3	11.9 0.0 42.1	.7 0.0 2.5	.198E+05 .174E+03 .696E+05	99 102 92	50 40 100	42 41 48	42 29 13	4 4 0
6/24/78		CAB	386 38	391 40	249 34	FLT IN NOT	TOT: CLR: CLR:	54 47 7	54 47 7	32 29 3	30 27 3	0 0 0	2.6 0.0 19.9	.5 0.0 4.1	.275E+05 .236E+02 .212E+06	97 96 108	45 43 55	24 24 29	49 43 6	5 4 1

APPENDIX B

DEP-ARR	IN/ID/IV	CODE	AVFL	EXHI	EXLO	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP	STRAT
			ALAT	EXTN	EXTS	CLD	PD5	OZ	H2O	H2S	XTIC	PATCHES	PD5				N	N	
JFK-LAX (CONT.)																			
6/ 6/79	CAB	367 36	390 40	295 34	FLT IN NOT	TOT: CLR: CLR:	50 43 7	50 43 7	0 0 0	29 25 4	2 0 2	4.6 0.0 32.8	.2 0.0 1.4	.164E+05 .254E+04 .102E+06	0 0 0	39 34 69	38 32 75	50 43 7	0 0 0
7/ 2/78	CAB	375 38	391 40	288 34	FLT IN NOT	TOT: CLR: CLR:	51 42 9	51 42 9	33 29 4	30 25 5	0 0 0	4.7 0.0 26.4	.4 0.0 2.4	.856E+04 .567E+02 .482E+05	71 68 87	7 7 5	8 8 10	51 42 9	0 0 0
7/17/78 *	CAB	380 40	410 42	285 35	FLT IN NOT	TOT: CLR: CLR:	47 43 4	47 43 4	31 29 2	27 26 1	0 0 0	.9 0.0 11.0	.2 0.0 2.3	.174E+04 .270E+02 .202E+05	106 107 81	23 23 16	28 28 12	41 37 4	6 6 0
7/20/78 *	CAB	362 39	373 41	197 34	FLT IN NOT	TOT: CLR: CLR:	48 36 12	48 36 12	32 24 8	28 21 7	0 0 0	2.3 0.0 9.1	.7 0.0 2.6	.349E+04 .850E+02 .137E+05	109 111 105	48 47 50	93 102 65	48 36 12	0 0 0
7/21/78	CAB	369 38	391 40	241 34	FLT IN NOT	TOT: CLR: CLR:	48 35 13	48 35 13	30 20 10	23 15 8	5 3 2	4.9 0.0 18.1	.6 0.0 2.2	.698E+04 .415E+02 .257E+05	111 115 103	66 51 92	75 72 82	48 35 13	0 0 0
7/23/78 *	CAB	379 40	410 42	289 35	FLT IN NOT	TOT: CLR: CLR:	43 39 4	43 39 4	27 24 3	22 22 0	0 0 0	.7 0.0 7.6	.1 0.0 1.3	.452E+04 .465E+02 .481E+05	85 84 95	21 21 0	18 18 0	43 39 4	0 0 0
11/ 9/78 *	BBB	346 39	370 41	212 35	FLT IN NOT	TOT: CLR: CLR:	47 34 13	47 34 13	30 23 7	23 18 5	2 0 2	10.5 0.0 38.1	.5 0.0 1.8	.210E+05 .385E+01 .760E+05	43 42 47	61 53 91	40 38 49	47 34 13	0 0 0
JFK-LHR																			
1/24/76 *	BBA	349 53	370 57	211 41	FLT IN NOT	TOT: CLR: CLR:	47 36 11	0 0 0	47 36 11	0 0 0	0 0 0	11.5 0.0 49.2	.6 0.0 2.4	0. 0. 0.	215 268 41	0 0 0	0 0 0	21 10 11	26 26 0
1/25/76	BBA	326 50	330 52	206 41	FLT IN NOT	TOT: CLR: CLR:	36 26 10	0 0 0	36 26 10	0 0 0	0 0 0	8.9 0.0 32.1	.8 0.0 2.8	0. 0. 0.	36 33 41	0 0 0	0 0 0	36 26 10	0 0 0
1/26/76 *	BBA	368 46	390 50	201 41	FLT IN NOT	TOT: CLR: CLR:	42 31 11	0 0 0	42 31 11	0 0 0	0 0 0	9.9 0.0 37.7	.6 0.0 2.2	0. 0. 0.	78 83 62	0 0 0	0 0 0	42 31 11	0 0 0
1/29/76	BBA	362 48	371 51	212 41	FLT IN NOT	TOT: CLR: CLR:	43 33 10	0 0 0	43 33 10	0 0 0	0 0 0	14.4 0.0 62.0	.5 0.0 2.0	0. 0. 0.	204 250 54	0 0 0	0 0 0	26 16 10	17 17 0
1/30/76 *	BBA	354 53	390 57	209 42	FLT IN NOT	TOT: CLR: CLR:	52 40 12	0 0 0	52 40 12	0 0 0	0 0 0	11.8 0.0 51.2	.6 0.0 2.8	0. 0. 0.	283 354 44	0 0 0	0 0 0	25 13 12	27 27 0

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR THE FLIGHT			PD5	OZ	RH	H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES							
JFK-LHR (CONT.)																				
1/ 5/79	*	BBB	319 46	351 51	201 41	FLT IN NOT	TOT: CLR: CLR:	78 50 28	0 0 0	50 32 18	40 24 16	2 0 2	13.2 0.0 36.8	.9 0.0 2.5	0. 0. 0.	61 79 30	58 45 79	76 60 102	57 29 28	21 21 0
1/ 8/79		BBB	352 51	371 55	254 42	FLT IN NOT	TOT: CLR: CLR:	56 25 31	0 0 0	36 18 18	18 13 5	0 0 0	43.4 0.0 78.3	.6 0.0 1.0	0. 0. 0.	185 329 41	52 39 86	25 14 53	23 1 22	33 24 9
1/ 9/79	*	BBB	348 46	391 52	197 41	FLT IN NOT	TOT: CLR: CLR:	75 31 44	0 0 0	49 19 30	43 18 25	5 0 5	40.0 0.0 68.2	1.4 0.0 2.4	0. 0. 0.	90 157 47	63 33 86	34 21 44	52 9 43	23 22 1
2/ 9/79		BBB	338 46	370 50	255 41	FLT IN NOT	TOT: CLR: CLR:	64 63 1	0 0 0	42 42 0	27 27 0	2 2 0	.0 0.0 1.2	.0 0.0 1.0	0. 0. 0.	302 302 0	33 33 0	48 48 0	1 1 0	63 62 1
2/14/79	*	BBB	364 53	390 57	251 42	FLT IN NOT	TOT: CLR: CLR:	68 67 1	0 0 0	46 46 0	35 34 1	0 0 0	.2 0.0 14.9	.0 0.0 3.0	0. 0. 0.	443 443 0	20 21 17	28 28 25	8 7 1	60 60 0
2/16/79		BBB	329 47	351 51	211 41	FLT IN NOT	TOT: CLR: CLR:	60 38 22	0 0 0	37 24 13	36 22 14	0 0 0	22.0 0.0 59.9	.6 0.0 1.7	0. 0. 0.	215 304 52	41 20 74	48 33 72	30 9 21	30 29 1
3/20/76	*	BBA	371 53	392 57	200 42	FLT IN NOT	TOT: CLR: CLR:	48 35 13	0 0 0	48 35 13	0 0 0	0 0 0	19.1 0.0 70.4	.8 0.0 3.1	0. 0. 0.	376 486 78	0 0 0	0 0 0	27 14 13	21 21 0
3/21/76		BBA	326 50	332 52	195 45	FLT IN NOT	TOT: CLR: CLR:	36 18 18	0 0 0	36 18 18	0 0 0	0 0 0	29.5 0.0 58.9	1.1 0.0 2.2	0. 0. 0.	142 208 76	0 0 0	0 0 0	36 18 18	0 0 0
3/22/76	*	BBA	369 46	390 51	209 41	FLT IN NOT	TOT: CLR: CLR:	50 38 12	0 0 0	50 38 12	0 0 0	0 0 0	12.3 0.0 51.4	.6 0.0 2.3	0. 0. 0.	226 276 66	0 0 0	0 0 0	31 19 12	19 19 0
3/23/76		BBA	322 50	331 53	196 41	FLT IN NOT	TOT: CLR: CLR:	38 38 0	0 0 0	38 38 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	174 174 0	0 0 0	0 0 0	38 38 0	0 0 0
3/ 9/79		BBB	352 49	360 52	217 42	FLT IN NOT	TOT: CLR: CLR:	61 44 17	0 0 0	39 29 10	32 25 7	0 0 0	13.1 0.0 47.0	.7 0.0 2.4	0. 0. 0.	185 223 74	52 46 77	24 23 30	44 28 16	17 16 1
3/15/79	*	BBB	326 50	331 53	221 41	FLT IN NOT	TOT: CLR: CLR:	71 58 13	0 0 0	46 37 9	37 29 8	7 6 1	5.5 0.0 30.3	.5 0.0 3.0	0. 0. 0.	188 219 63	75 74 80	61 68 39	0 0 0	0 0 0
4/10/76		BBA	336 49	371 52	202 41	FLT IN NOT	TOT: CLR: CLR:	40 37 3	0 0 0	40 37 3	0 0 0	0 0 0	6.9 0.0 91.5	.3 0.0 3.7	0. 0. 0.	147 149 113	0 0 0	0 0 0	40 37 3	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S			%TIC	PATCHES	PD5					
JFK-LHR (CONT.)																				
4/11/76	*	BBA	342 52	390 56	201 41	FLT IN NOT	TOT: CLR: CLR:	49 42 7	0 0 0	49 42 7	0 0 0	0 0 0	7.1 0.0 50.0	.4 0.0 2.9	0. 0. 0.	266 297 63	0 0 0	0 0 0	27 20 7	22 22 0
4/18/76		BBA	324 49	340 53	204 41	FLT IN NOT	TOT: CLR: CLR:	38 33 5	0 0 0	38 33 5	0 0 0	0 0 0	.9 0.0 6.8	.7 0.0 5.2	0. 0. 0.	331 316 428	0 0 0	0 0 0	20 18 2	18 15 3
5/13/77		AAA	387 47	390 51	308 41	FLT IN NOT	TOT: CLR: CLR:	64 62 2	64 62 2	42 41 1	0 0 0	0 0 0	.4 0.0 13.1	.1 0.0 2.5	.317E+04 .409E+01 .101E+06	563 570 292	0 0 0	0 0 0	2 1 1	62 61 1
5/14/77	*	AAA	397 53	430 57	201 41	FLT IN NOT	TOT: CLR: CLR:	73 73 0	73 73 0	47 47 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.421E+02 .421E+02 0.	524 524 0	0 0 0	0 0 0	3 3 0	70 70 0
5/15/77		AAA	369 46	371 51	308 41	FLT IN NOT	TOT: CLR: CLR:	61 61 0	61 61 0	40 40 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.223E+02 .223E+02 0.	346 346 0	0 0 0	0 0 0	20 20 0	41 41 0
5/15/77	*	AAA	388 54	391 58	280 42	FLT IN NOT	TOT: CLR: CLR:	72 72 0	72 72 0	49 49 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.889E+01 .889E+01 0.	418 418 0	0 0 0	0 0 0	1 1 0	71 71 0
5/30/77		AAA	397 49	410 52	338 42	FLT IN NOT	TOT: CLR: CLR:	28 28 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	2 2 0	26 26 0
5/31/77	*	AAA	408 52	420 56	320 43	FLT IN NOT	TOT: CLR: CLR:	39 39 0	39 39 0	26 26 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.851E+01 .851E+01 0.	450 450 0	0 0 0	0 0 0	3 3 0	36 36 0
5/12/79	*	BDB	338 50	371 53	213 41	FLT IN NOT	TOT: CLR: CLR:	66 50 16	66 50 16	0 0 0	32 25 7	4 1 3	1.8 0.0 7.6	.5 0.0 2.3	.199E+05 .246E+04 .744E+05	0 0 0	54 42 95	74 68 98	57 41 16	9 9 0
5/21/79	*	BDB	346 51	370 54	219 41	FLT IN NOT	TOT: CLR: CLR:	76 55 21	76 55 21	49 37 12	45 31 14	7 1 6	3.0 0.0 11.0	.8 0.0 3.0	.506E+05 .377E+04 .173E+06	246 300 81	59 45 89	76 59 115	46 27 21	28 28 0
5/24/79		BDB	353 49	370 52	249 42	FLT IN NOT	TOT: CLR: CLR:	63 50 13	63 50 13	41 33 8	29 22 7	11 5 6	4.6 0.0 22.5	.7 0.0 3.5	.623E+05 .423E+04 .286E+06	258 298 94	68 58 99	53 39 95	39 26 13	24 24 0
5/30/79		BDB	336 49	370 52	276 41	FLT IN NOT	TOT: CLR: CLR:	66 45 21	66 45 21	42 28 14	35 26 9	0 0 0	5.7 0.0 17.8	.7 0.0 2.3	.860E+05 .414E+04 .261E+06	218 275 103	29 27 33	28 21 46	48 27 21	18 18 0
6/ 5/79	*	BDB	362 49	390 52	201 41	FLT IN NOT	TOT: CLR: CLR:	72 51 21	72 51 21	45 33 12	36 25 11	19 9 10	4.7 0.0 16.1	.9 0.0 3.0	.799E+05 .622E+04 .259E+06	189 227 85	77 67 99	70 80 47	42 24 18	30 27 3

APPENDIX B

DEP-ARR		CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP N	STRAT N	
IM/ID/IY						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
JFK-LHR (CONT.)																				
6/	6/79	BDB	355 49	370 52	264 41	FLT IN NOT	TOT CLR CLR	66 45 21	66 45 21	42 32 10	31 24 7	9 4 5	5.6 0.0 17.6	.9 0.0 2.8	.954E+05 .148E+05 .268E+06	226 266 95	63 54 94	55 54 59	34 21 13	32 24 8
9/	7/76	* BBA	360 50	390 53	281 42	FLT IN NOT	TOT CLR CLR	69 69 0	0 0 0	43 43 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	86 86 0	0 0 0	0 0 0	51 51 0	18 18 0
9/	8/76	BBA	343 52	370 55	227 41	FLT IN NOT	TOT CLR CLR	64 64 0	0 0 0	41 41 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	128 128 0	0 0 0	0 0 0	37 37 0	27 27 0
9/	9/76	* BBA	344 48	370 52	199 41	FLT IN NOT	TOT CLR CLR	73 73 0	0 0 0	48 48 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	93 93 0	0 0 0	0 0 0	52 52 0	21 21 0
9/10/76	* BBA	346 51	365 55	193 39	FLT IN NOT	TOT CLR CLR	81 81 0	0 0 0	54 54 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	98 98 0	0 0 0	0 0 0	64 64 0	17 17 0
9/11/76	BBA	357 52	369 56	227 41	FLT IN NOT	TOT CLR CLR	70 70 0	0 0 0	42 42 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	90 90 0	0 0 0	0 0 0	60 60 0	10 10 0
9/12/76	* BBA	354 48	390 52	195 41	FLT IN NOT	TOT CLR CLR	69 69 0	0 0 0	45 45 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	83 83 0	0 0 0	0 0 0	57 57 0	12 12 0
9/15/76	BBA	341 49	349 53	251 41	FLT IN NOT	TOT CLR CLR	63 63 0	0 0 0	42 42 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	74 74 0	0 0 0	0 0 0	61 61 0	2 2 0
9/22/76	* BBA	337 48	370 53	200 41	FLT IN NOT	TOT CLR CLR	70 69 1	0 0 0	42 41 1	0 0 0	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	0.	80 81 41	0 0 0	0 0 0	0 0 0	0 0 0
9/28/77	* ABA	397 53	410 56	268 42	FLT IN NOT	TOT CLR CLR	76 76 0	0 0 0	49 49 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0.	208 208 0	0 0 0	0 0 0	17 17 0	59 59 0
10/	9/77	* BCB	343 54	370 57	268 46	FLT IN NOT	TOT CLR CLR	68 39 29	68 39 29	0 0 0	0 0 0	0 0 0	21.5 0.0 50.4	0.0 0.0 0.0	.581E+05 .741E+01 .136E+06	0 0 0	0 0 0	0 0 0	43 16 27	25 23 2
10/11/77	BCB	306 55	331 62	235 42	FLT IN NOT	TOT CLR CLR	59 35 24	59 35 24	0 0 0	0 0 0	0 0 0	0 0 0	25.8 0.0 63.5	0.0 0.0 0.0	.845E+05 .310E+02 .208E+06	0 0 0	0 0 0	0 0 0	53 29 24	6 6 0
10/	1/78	* BBB	342 48	370 52	200 41	FLT IN NOT	TOT CLR CLR	75 65 10	75 65 10	49 43 6	0 0 0	0 0 0	2.6 0.0 19.8	.4 0.0 2.8	.124E+05 .326E+03 .906E+05	74 76 60	0 0 0	0 0 0	75 65 10	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT		PD5		02	RH	H2O	TROP N	STRAT N
							CLD	PD5	02	H2O	H2S	%TIC	PATCHES							
JFK-LHR (CONT.)																				
10/10/78	*	BBB	349 51	371 53	220 41	FLT TOT: IN CLR: NOT CLR:	67 52 15	67 52 15	43 34 9	0 0 0	0 0 0	11.5 0.0 51.3	.7 0.0 3.2	.462E+05 .110E+02 .206E+06	219 262 55	0 0 0	0 0 0	29 14 15	38 38 0	
10/11/78		BBB	352 48	371 51	199 41	FLT TOT: IN CLR: NOT CLR:	68 66 2	68 66 2	43 42 1	0 0 0	0 0 0	.9 0.0 30.6	.1 0.0 3.0	.340E+03 .182E+03 .555E+04	177 179 82	0 0 0	0 0 0	34 33 1	34 33 1	
10/12/78	*	BBB	339 50	371 54	230 41	FLT TOT: IN CLR: NOT CLR:	68 56 12	68 56 12	43 37 6	0 0 0	0 0 0	5.0 0.0 28.4	.7 0.0 3.8	.681E+04 .271E+03 .374E+05	99 105 65	0 0 0	0 0 0	58 48 10	10 8 2	
10/16/78	*	BBB	336 48	351 52	201 41	FLT TOT: IN CLR: NOT CLR:	67 42 25	67 42 25	44 29 15	0 0 0	0 0 0	24.8 0.0 66.5	.7 0.0 1.9	.604E+05 .796E+02 .162E+06	66 70 57	0 0 0	0 0 0	67 42 25	0 0 0	
10/18/78		BBB	361 52	371 55	272 41	FLT TOT: IN CLR: NOT CLR:	60 47 13	60 47 13	38 31 7	0 0 0	0 0 0	4.2 0.0 19.2	.8 0.0 3.7	.219E+05 .219E+03 .100E+06	140 146 111	0 0 0	0 0 0	18 13 5	42 34 8	
10/19/78	*	BBB	353 49	371 52	206 41	FLT TOT: IN CLR: NOT CLR:	72 47 25	72 47 25	45 30 15	0 0 0	0 0 0	17.1 0.0 49.3	1.0 0.0 2.9	.580E+05 .348E+02 .167E+06	132 170 56	0 0 0	0 0 0	44 19 25	28 28 0	
10/20/78		BBB	333 50	341 53	199 41	FLT TOT: IN CLR: NOT CLR:	62 41 21	62 41 21	38 23 15	0 0 0	0 0 0	12.8 0.0 37.7	1.2 0.0 3.5	.532E+05 .114E+02 .157E+06	92 119 52	0 0 0	0 0 0	48 28 20	14 13 1	
10/30/78	*	BBB	332 53	350 57	220 41	FLT TOT: IN CLR: NOT CLR:	75 68 7	75 68 7	48 44 4	44 41 3	1 0 1	.9 0.0 9.5	.2 0.0 2.6	.205E+04 .172E+02 .218E+05	188 201 51	37 33 93	42 38 100	29 22 7	46 46 0	
11/21/77		BCB	345 52	351 55	262 41	FLT TOT: IN CLR: NOT CLR:	71 42 29	71 42 29	47 27 20	0 0 0	0 0 0	15.0 0.0 36.7	0.0 0.0 0.0	.221E+05 .323E+02 .540E+05	127 173 65	0 0 0	0 0 0	49 20 29	22 22 0	
11/ 2/78		BBB	327 49	350 53	232 41	FLT TOT: IN CLR: NOT CLR:	59 57 2	59 57 2	38 37 1	30 29 1	0 0 0	.7 0.0 21.8	.1 0.0 2.5	.115E+03 .921E+02 .765E+03	168 172 4	32 31 51	40 28 402	40 38 2	19 19 0	
11/21/78	*	BBB	326 52	370 56	193 41	FLT TOT: IN CLR: NOT CLR:	80 68 12	80 68 12	55 47 8	44 38 6	0 0 0	2.8 0.0 19.0	.6 0.0 4.3	.126E+05 .314E+02 .840E+05	150 169 36	35 28 80	35 27 87	37 25 12	43 43 0	
12/ 6/78		BBB	326 48	331 51	255 41	FLT TOT: IN CLR: NOT CLR:	61 58 3	61 58 3	37 35 2	30 30 0	0 0 0	1.8 0.0 37.5	.1 0.0 1.7	.159E+05 .132E+02 .323E+06	200 208 55	26 26 0	59 59 0	21 18 3	40 40 0	
12/16/78	*	BBB	343 51	370 53	219 41	FLT TOT: IN CLR: NOT CLR:	71 49 22	71 49 22	45 31 14	41 29 12	11 1 10	15.3 0.0 49.5	.9 0.0 3.0	.432E+05 .204E+02 .139E+06	154 206 40	64 50 97	33 29 45	0 0 0	0 0 0	

APPENDIX B

DEP-ARR	IM/1D/1Y	CODE	AVFL ALAT	EXH1 EXTN	EXL0 EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	OZ	RH	H20	TROP	STRAT	
						CLD	PD5	OZ	H20	H2S	%TIC	PATCHES	PD5				N	N	
JFK-LHR (CONT.)																			
12/26/78		BBB	342 47	351 51	244 41	FLT IN NOT	TOT: CLR: CLR:	62 61 1	62 61 1	0 0 0	33 33 0	0 0 0	.5 0.0 32.9	.0 0.0 1.0	.832E+02 .846E+02 0.	0 0 0	27 27 0	47 47 0	0 0 0
JFK-ORD																			
2/28/76	*	CAA	331 42	370 42	212 41	FLT IN NOT	TOT: CLR: CLR:	8 7 1	0 0 0	8 7 1	7 6 1	6 5 1	6.3 0.0 50.6	0.0 0.0 0.0	0. 0. 0.	154 167 66	99 99 100	81 91 20	3 2 1
2/16/79	*	CAB	349 42	370 42	228 41	FLT IN NOT	TOT: CLR: CLR:	10 10 0	10 10 0	6 6 0	5 5 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.357E+02 .357E+02 0.	161 161 0	19 19 0	30 30 0	2 2 0
2/21/79		CAB	380 41	391 42	265 40	FLT IN NOT	TOT: CLR: CLR:	16 16 0	16 16 0	11 11 0	9 9 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.551E+02 .551E+02 0.	273 273 0	83 83 0	44 44 0	1 1 0
3/ 6/79		CAB	386 41	411 41	284 40	FLT IN NOT	TOT: CLR: CLR:	12 10 2	12 10 2	8 7 1	4 4 0	2 2 0	6.5 0.0 39.0	0.0 0.0 0.0	.120E+05 .562E+02 .716E+05	431 447 317	95 95 0	139 139 0	2 2 0
3/15/79		CAB	380 41	411 41	217 40	FLT IN NOT	TOT: CLR: CLR:	15 14 1	15 14 1	9 9 0	6 5 1	0 0 0	.3 0.0 5.1	.1 0.0 1.0	.275E+04 .746E+02 .402E+05	631 631 0	22 24 10	28 26 42	0 0 0
3/23/79	*	CAB	385 42	411 42	248 41	FLT IN NOT	TOT: CLR: CLR:	12 9 3	12 9 3	8 7 1	6 5 1	0 0 0	7.0 0.0 28.0	.5 0.0 2.0	.178E+05 .230E+03 .706E+05	216 231 107	51 47 69	22 22 20	4 2 2
3/26/79	*	CAB	389 42	411 42	310 41	FLT IN NOT	TOT: CLR: CLR:	11 11 0	11 11 0	7 7 0	6 6 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.797E+03 .797E+03 0.	302 302 0	31 31 0	37 37 0	1 1 0
5/13/76		CAA	325 41	350 41	203 40	FLT IN NOT	TOT: CLR: CLR:	15 4 11	0 0 0	10 3 7	0 0 0	0 0 0	27.7 0.0 37.8	1.2 0.0 1.6	0. 0. 0.	80 80 79	0 0 0	0 0 0	15 4 11
6/20/78		CAB	337 41	390 41	191 40	FLT IN NOT	TOT: CLR: CLR:	12 11 1	12 11 1	8 8 0	7 6 1	0 0 0	.2 0.0 2.4	.2 0.0 2.0	.133E+04 .143E+04 .200E+03	117 117 0	40 35 76	124 138 39	12 11 1
6/26/78		CAB	293 43	390 43	210 42	FLT IN NOT	TOT: CLR: CLR:	21 12 9	21 12 9	15 8 7	8 8 0	2 2 0	17.0 0.0 39.7	.9 0.0 2.1	.506E+05 .682E+03 .117E+06	71 62 81	741 741 0	542 542 0	21 12 9
6/ 6/79	*	CAB	348 42	380 42	207 41	FLT IN NOT	TOT: CLR: CLR:	11 6 5	11 6 5	0 0 0	5 2 3	1 1 0	8.9 0.0 19.5	.5 0.0 1.0	.154E+05 .774E+04 .245E+05	0 0 0	48 70 34	181 54 265	11 6 5

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT			
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
JFK-ORD (CONT.)																				
7/ 2/78	*	CAB	345 42	371 42	241 41	FLT IN NOT	TOT CLR CLR	10 4 6	10 4 6	6 2 4	6 2 4	0 0 0	19.7 0.0 32.8	1.0 0.0 1.7	.294E+05 .624E+04 .449E+05	35 85 86	8 11 6	12 21 7	10 4 6	0 0 0
7/12/78	*	CAB	396 42	410 42	336 41	FLT IN NOT	TOT CLR CLR	10 10 0	10 10 0	0 0 0	5 5 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.604E+02 .604E+02 0.	0 0 0	11 11 0	6 8 0	4 4 0	6 6 0
7/12/78		CAB	335 42	351 43	264 42	FLT IN NOT	TOT CLR CLR	13 12 1	13 12 1	8 8 0	7 7 0	0 0 0	.7 0.0 8.6	.2 0.0 2.0	.155E+03 .968E+02 .856E+03	75 75 0	12 12 0	21 21 0	13 12 1	0 0 0
7/17/78		CAB	352 41	391 41	247 40	FLT IN NOT	TOT CLR CLR	13 11 2	13 11 2	9 8 1	5 4 1	0 0 0	3.6 0.0 23.3	1.1 0.0 7.0	.892E+04 .597E+01 .580E+05	214 202 309	30 36 10	219 269 19	13 11 2	0 0 0
JFK-SFO																				
2/ 1/76		BBA	369 42	390 43	211 38	FLT IN NOT	TOT CLR CLR	35 33 2	0 0 0	35 33 2	0 0 0	0 0 0	2.1 0.0 36.5	.0 0.0 .5	0. 0. 0.	201 212 20	0 0 0	0 0 0	15 13 2	20 20 0
2/ 2/77		AAA	421 43	430 45	196 38	FLT IN NOT	TOT CLR CLR	55 55 0	55 55 0	0 0 0	45 45 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.267E+02 .267E+02 0.	0 0 0	23 23 0	22 22 0	3 3 0	52 52 0
2/ 8/79		CAB	367 41	391 43	253 38	FLT IN NOT	TOT CLR CLR	55 43 12	55 43 12	35 27 8	32 24 8	2 2 0	11.7 0.0 53.6	.9 0.0 4.0	.640E+05 .945E+02 .293E+06	286 358 42	61 57 73	59 69 28	14 2 12	41 41 0
2/10/79		CAB	382 38	391 40	257 36	FLT IN NOT	TOT CLR CLR	61 36 25	61 36 25	40 24 16	35 21 14	7 2 5	27.5 0.0 67.2	1.0 0.0 2.3	.898E+05 .200E+03 .219E+06	201 306 43	76 68 88	32 42 16	30 5 25	31 31 0
2/28/79	*	CAB	375 41	411 42	239 38	FLT IN NOT	TOT CLR CLR	48 33 15	48 33 15	32 23 9	20 14 6	18 12 6	12.8 0.0 40.9	.5 0.0 1.5	.205E+05 .700E+03 .641E+05	291 359 119	95 93 100	45 55 23	11 3 8	37 30 7
3/18/76		BBA	334 40	351 41	203 38	FLT IN NOT	TOT CLR CLR	38 22 16	0 0 0	38 22 16	0 0 0	0 0 0	18.8 0.0 44.7	1.6 0.0 3.7	0. 0. 0.	110 143 64	0 0 0	0 0 0	38 22 16	0 0 0
3/30/77		AAA	347 43	350 45	227 38	FLT IN NOT	TOT CLR CLR	58 57 1	58 57 1	0 0 0	48 47 1	2 2 0	.1 0.0 5.1	.0 0.0 2.0	.138E+02 .140E+02 0.	0 0 0	28 27 56	22 21 68	0 0 0	0 0 0
3/18/79		CAB	382 41	391 42	319 38	FLT IN NOT	TOT CLR CLR	54 30 24	54 30 24	32 20 12	24 13 11	9 1 8	21.6 0.0 48.6	.9 0.0 2.0	.637E+05 .506E+03 .143E+06	300 422 96	66 39 98	23 30 16	25 3 22	29 27 2

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT					TROP	STRAT	
							CLD	PD5	QZ	H2Q, H2S		%TIC	PATCHES	PD5	QZ	RH	H2Q	N	N
JFK-SFO (CONT.)																			
5/ 4/77	AAA	414 42	435 43	242 38	FLT TOT: IN CLR: NOT CLR:	57 48 9	57 48 9	38 34 4	0 0 0	0 0 0	4.1 0.0 25.7	.2 0.0 1.4	.118E+05 .534E+02 .747E+05	302 324 117	0 0 0	0 0 0	21 12 9	36 36 0	
5/ 8/77 *	AAA	389 41	410 42	198 38	FLT TOT: IN CLR: NOT CLR:	50 49 1	50 49 1	31 31 0	0 0 0	0 0 0	1.1 0.0 53.7	.1 0.0 3.0	.456E+04 .199E+03 .218E+06	356 356 0	0 0 0	0 0 0	4 4 0	46 45 1	
5/18/77	AAA	396 42	430 43	241 38	FLT TOT: IN CLR: NOT CLR:	22 17 5	22 17 5	8 6 2	0 0 0	0 0 0	4.6 0.0 20.1	.6 0.0 2.8	.105E+05 .865E+02 .458E+05	236 309 20	0 0 0	0 0 0	5 4 1	17 13 4	
5/22/77 *	AAA	370 41	372 42	370 38	FLT TOT: IN CLR: NOT CLR:	24 13 11	24 13 11	16 10 6	0 0 0	0 0 0	17.8 0.0 38.9	1.2 0.0 2.6	.990E+05 .146E+03 .216E+06	121 148 75	0 0 0	0 0 0	18 8 10	6 5 1	
6/17/78 *	CAB	359 41	372 43	203 38	FLT TOT: IN CLR: NOT CLR:	45 32 13	45 32 13	29 20 9	25 19 6	3 0 3	13.6 0.0 47.2	.6 0.0 2.2	.525E+05 .438E+04 .171E+06	107 132 52	66 56 97	191 49 641	45 32 13	0 0 0	
6/26/78 *	CAB	364 41	370 42	222 38	FLT TOT: IN CLR: NOT CLR:	44 40 4	44 40 4	29 26 3	25 24 1	0 0 0	6.0 0.0 66.1	.2 0.0 1.6	.108E+05 .113E+03 .118E+06	123 123 80	32 31 371	77 35 071	37 33 4	7 7 0	
6/27/78	CAB	364 37	391 39	287 35	FLT TOT: IN CLR: NOT CLR:	57 50 7	57 50 7	37 32 5	32 27 5	5 2 3	4.3 0.0 34.7	.3 0.0 2.3	.117E+05 .421E+02 .953E+05	165 192 54	32 24 77	54 39 133	49 42 7	8 8 0	
6/ 2/79	CAB	372 43	391 45	210 37	FLT TOT: IN CLR: NOT CLR:	53 46 7	53 46 7	0 0 0	28 26 2	2 1 1	2.1 0.0 16.0	.4 0.0 2.9	.569E+04 .340E+04 .207E+05	0 0 0	36 33 78	31 26 91	27 20 7	26 26 0	
6/ 7/79 *	CAB	359 41	370 42	250 38	FLT TOT: IN CLR: NOT CLR:	45 31 14	45 31 14	0 0 0	24 16 8	1 1 0	12.7 0.0 40.9	1.3 0.0 4.1	.518E+05 .189E+04 .162E+06	0 0 0	41 26 72	65 72 52	43 29 14	2 2 0	
6/ 8/79	CAB	364 40	391 41	274 38	FLT TOT: IN CLR: NOT CLR:	55 42 13	55 42 13	0 0 0	29 27 2	1 0 1	5.1 0.0 21.5	.5 0.0 2.0	.142E+05 .590E+03 .581E+05	0 0 0	30 26 82	53 47 133	36 23 13	19 19 0	
7/ 3/77 *	ACA	407 41	410 42	318 38	FLT TOT: IN CLR: NOT CLR:	46 46 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	46 46 0	0 0 0	
7/13/78 *	CAB	376 41	410 42	309 38	FLT TOT: IN CLR: NOT CLR:	45 44 1	45 44 1	27 26 1	22 21 1	0 0 0	.1 0.0 3.5	.0 0.0 1.0	.143E+02 .146E+02 0.	44 44 45	21 18 65	34 24 248	0 0 0	0 0 0	
7/14/78	CAB	359 39	390 40	211 38	FLT TOT: IN CLR: NOT CLR:	56 53 3	56 53 3	33 33 0	19 19 0	0 0 0	3.9 0.0 73.3	.2 0.0 4.0	.140E+05 .219E+02 .262E+06	60 80 0	28 28 0	36 36 0	56 53 3	0 0 0	

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ RH H2O			TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O		
JFK-SFO (CONT.)																		
9/28/77	ABA	419	430	231	FLT TOT:	54	0	34	0	0	.0	.0	0.	92	0	0	41	13
		40	40	38	IN CLR:	53	0	34	0	0	0.0	0.0	0.	92	0	0	40	13
					NOT CLR:	1	0	0	0	0	2.0	1.0	0.	0	0	0	1	0
10/ 2/77 *	ABA	384	410	315	FLT TOT:	23	0	14	0	0	.6	.5	0.	107	0	0	23	0
		40	41	38	IN CLR:	22	0	13	0	0	0.0	0.0	0.	109	0	0	22	0
					NOT CLR:	1	0	1	0	0	13.3	12.0	0.	79	0	0	1	0
10/31/77 *	ABB	347	350	330	FLT TOT:	47	47	30	0	0	12.8	1.8	.110E+06	90	0	0	36	11
		41	42	38	IN CLR:	32	32	20	0	0	0.0	0.0	.472E+02	117	0	0	21	11
					NOT CLR:	15	15	10	0	0	40.1	5.7	.345E+06	37	0	0	15	0
12/15/76	AAA	346	350	209	FLT TOT:	56	0	36	0	0	6.5	.3	0.	118	0	0	26	29
		41	43	38	IN CLR:	45	0	29	0	0	0.0	0.0	0.	134	0	0	15	29
					NOT CLR:	11	0	7	0	0	33.2	1.7	0.	50	0	0	11	0
12/19/76 *	AAA	411	430	224	FLT TOT:	47	0	31	0	0	.9	.2	0.	189	0	0	3	44
		41	42	38	IN CLR:	46	0	31	0	0	0.0	0.0	0.	189	0	0	2	44
					NOT CLR:	1	0	0	0	0	41.2	9.0	0.	0	0	0	1	0
12/22/76	AAA	347	350	240	FLT TOT:	56	0	27	0	0	19.2	.9	0.	143	0	0	33	23
		41	43	38	IN CLR:	39	0	16	0	0	0.0	0.0	0.	209	0	0	16	23
					NOT CLR:	17	0	11	0	0	63.1	3.1	0.	47	0	0	17	0
12/26/76 *	AAA	404	411	202	FLT TOT:	46	0	32	35	14	5.8	.6	0.	234	72	19	2	44
		41	42	39	IN CLR:	37	0	25	27	6	0.0	0.0	0.	279	63	21	2	35
					NOT CLR:	9	0	7	8	8	29.7	3.0	0.	76	100	13	0	9
12/29/76	AAA	416	434	316	FLT TOT:	54	0	0	0	0	.3	.1	0.	0	0	0	1	53
		41	43	38	IN CLR:	53	0	0	0	0	0.0	0.0	0.	0	0	0	0	53
					NOT CLR:	1	0	0	0	0	17.3	3.0	0.	0	0	0	1	0
JFK-SNN																		
1/27/76 *	BBA	362	391	201	FLT TOT:	44	0	44	0	0	57.4	2.3	0.	116	0	0	37	7
		49	53	41	IN CLR:	12	0	12	0	0	0.0	0.0	0.	329	0	0	5	7
					NOT CLR:	32	0	32	0	0	78.9	3.2	0.	37	0	0	32	0
11/30/78 *	BBB	324	350	220	FLT TOT:	69	69	44	38	3	8.5	.5	.176E+05	166	35	48	26	43
		51	55	41	IN CLR:	53	53	34	29	0	0.0	0.0	.171E+02	204	18	20	10	43
					NOT CLR:	16	16	10	9	3	36.5	2.1	.758E+05	38	91	138	16	0
JFK-YQX																		
1/ 8/79 *	BBB	326	351	201	FLT TOT:	13	0	8	8	5	88.8	3.0	0.	33	86	51	12	1
		44	48	41	IN CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
					NOT CLR:	13	0	8	8	5	88.8	3.0	0.	33	86	51	12	1



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT		PD5			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES								
JNB-MRU																				
1/27/77	*	DDA	304 -24	310 -21	193 -26	FLT IN NOT	TOT: CLR: CLR:	30 19 11	30 19 11	15 12 3	0 0 0	0 0 0	14.3 0.0 38.9	1.5 0.0 4.0	.124E+06 .652E+01 .338E+06	46 47 43	0 0 0	0 0 0	30 19 11	0 0 0
1/28/77		DDA	324 -22	330 -21	204 -24	FLT IN NOT	TOT: CLR: CLR:	21 14 7	21 14 7	14 9 5	0 0 0	0 0 0	5.8 0.0 17.3	1.1 0.0 3.4	.184E+05 .112E+02 .552E+05	70 68 73	0 0 0	0 0 0	21 14 7	0 0 0
2/17/77	*	DDA	309 -24	310 -21	272 -26	FLT IN NOT	TOT: CLR: CLR:	30 29 1	30 29 1	19 19 0	0 0 0	0 0 0	.0 0.0 1.2	.1 0.0 3.0	.744E+02 .117E+02 .189E+04	43 43 0	0 0 0	0 0 0	0 0 0	0 0 0
2/18/77		DDA	338 -24	370 -21	255 -26	FLT IN NOT	TOT: CLR: CLR:	35 33 2	35 33 2	23 21 2	0 0 0	0 0 0	1.3 0.0 22.4	.2 0.0 4.0	.147E+03 .870E+01 .244E+04	48 46 60	0 0 0	0 0 0	0 0 0	0 0 0
KHI-THR																				
3/16/79	*	BBB	289 30	291 34	250 26	FLT IN NOT	TOT: CLR: CLR:	19 13 6	0 0 0	11 8 3	10 7 3	0 0 0	13.2 0.0 41.9	1.2 0.0 3.7	0. 0. 0.	54 54 54	46 27 92	204 90 471	19 13 6	0 0 0
3/17/79		BBB	346 31	350 35	257 27	FLT IN NOT	TOT: CLR: CLR:	23 17 6	0 0 0	4 2 2	13 11 2	1 0 1	5.1 0.0 19.5	.7 0.0 2.5	0. 0. 0.	59 60 58	40 30 98	54 34 165	23 17 6	0 0 0
10/ 9/77		BCB	385 30	390 34	311 26	FLT IN NOT	TOT: CLR: CLR:	23 23 0	23 23 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.711E+01 .711E+01 0.	0 0 0	0 0 0	0 0 0	23 23 0	0 0 0
11/22/78	*	BBB	347 30	371 35	196 26	FLT IN NOT	TOT: CLR: CLR:	19 18 1	19 18 1	11 11 0	9 9 0	0 0 0	1.2 0.0 22.0	.4 0.0 7.0	.202E+02 .213E+02 0.	93 93 0	30 30 0	18 18 0	14 13 1	5 5 0
11/23/78		BBB	385 30	390 35	294 25	FLT IN NOT	TOT: CLR: CLR:	27 27 0	27 27 0	10 10 0	15 15 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.155E+02 .155E+02 0.	141 141 0	32 32 0	15 15 0	14 14 0	13 13 0
12/20/79	*	BBB	360 30	370 34	270 26	FLT IN NOT	TOT: CLR: CLR:	20 20 0	20 20 0	11 11 0	10 10 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.230E+02 .230E+02 0.	164 164 0	37 37 0	31 31 0	0 0 0	0 0 0
12/21/79		BBB	342 30	351 35	269 25	FLT IN NOT	TOT: CLR: CLR:	20 19 1	20 19 1	10 9 1	6 5 1	0 0 0	.7 0.0 13.7	.2 0.0 3.0	.982E+01 .103E+02 0.	81 87 29	45 49 21	28 28 31	0 0 0	0 0 0

DEP-ARR	IM/10/1Y	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT		
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N		
KUL-MEL																			
12/17/76	DDA	366 -19	370 1	241 -37	FLT IN NOT	TOT: CLR: CLR:	78 76 2	0 0 0	0 0 0	0 0 0	.4 0.0 15.1	.1 0.0 2.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
12/18/76 *	DDA	329 -17	350 1	228 -36	FLT IN NOT	TOT: CLR: CLR:	77 68 9	0 0 0	0 0 0	0 0 0	1.1 0.0 9.7	.3 0.0 2.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
KUL-SYD																			
12/17/76 *	DDA	338 -16	350 1	192 -33	FLT IN NOT	TOT: CLR: CLR:	81 77 4	0 0 0	0 0 0	0 0 0	1.0 0.0 20.1	.1 0.0 2.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
12/18/76	DDA	366 -16	390 1	249 -34	FLT IN NOT	TOT: CLR: CLR:	79 68 11	0 0 0	0 0 0	0 0 0	3.6 0.0 25.8	.5 0.0 3.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
LAS-ORD																			
1/29/76	CAA	360 40	410 42	211 37	FLT IN NOT	TOT: CLR: CLR:	20 19 1	0 0 0	20 19 1	17 16 1	9 8 1	.0 0.0 .8	.0 0.0 1.0	0. 0. 0.	83 85 37	73 72 100	44 46 24	14 13 1	6 6 0
1/29/76 *	CAA	372 38	390 42	202 36	FLT IN NOT	TOT: CLR: CLR:	24 24 0	0 0 0	24 24 0	20 20 0	20 20 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	48 48 0	100 100 0	38 38 0	20 20 0	4 4 0
3/ 2/76 *	CAA	379 41	391 42	216 39	FLT IN NOT	TOT: CLR: CLR:	17 11 6	0 0 0	17 11 6	16 10 6	9 3 6	26.8 0.0 76.0	.6 0.0 1.8	0. 0. 0.	239 339 55	73 57 100	32 40 20	8 2 6	9 9 0
3/ 3/76	CAA	354 40	390 42	212 37	FLT IN NOT	TOT: CLR: CLR:	17 16 1	0 0 0	17 16 1	2 2 0	3.5 0.0 60.0	.1 0.0 2.0	0. 0. 0.	323 340 43	51 51 0	41 41 0	5 4 1	12 12 0	
3/30/76	CAA	381 39	410 41	224 37	FLT IN NOT	TOT: CLR: CLR:	18 18 0	0 0 0	18 18 0	6 6 0	6 6 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	493 493 0	45 45 0	69 69 0	3 3 0	15 15 0
3/30/76 *	CAA	372 40	390 42	227 37	FLT IN NOT	TOT: CLR: CLR:	19 18 1	0 0 0	19 18 1	2 1 1	2 1 1	.6 0.0 10.6	.1 0.0 2.0	0. 0. 0.	556 583 65	20 15 100	45 39 160	3 2 1	16 16 0
4/12/76 *	CAA	377 41	390 42	220 39	FLT IN NOT	TOT: CLR: CLR:	15 15 0	0 0 0	15 15 0	10 10 0	10 10 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	252 252 0	93 93 0	54 54 0	12 12 0	3 3 0

DEP-ARR	IM/ID/IY	CODE	AVFL	EXHI	EXLO	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH H2O		TRCP	STRAT
			ALAT	EXTN	EXTS	CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N		
LAS-ORD (CONT.)																				
4/20/76	*	CAA	373 40	390 42	210 37	FLT IN NOT	TOT CLR CLR	20 18 2	0 0 0	20 18 2	20 18 2	4 2 2	5.5 0.0 55.1	.4 0.0 3.5	0. 0. 0.	278 293 146	55 50 100	145 159 23	7 5 2	13 13 0
4/20/76		CAA	354 40	370 42	213 37	FLT IN NOT	TOT CLR CLR	19 13 6	0 0 0	19 13 6	19 13 6	8 2 6	21.7 0.0 68.8	.4 0.0 1.3	0. 0. 0.	141 158 106	88 83 100	159 120 244	19 13 6	0 0 0
5/ 6/76		CAA	354 40	392 42	211 37	FLT IN NOT	TOT CLR CLR	30 17 13	0 0 0	10 3 7	0 0 0	0 0 0	24.2 0.0 56.0	.8 0.0 1.9	0. 0. 0.	100 103 98	0 0 0	0 0 0	30 17 13	0 0 0
5/ 6/76	*	CAA	380 39	410 42	214 36	FLT IN NOT	TOT CLR CLR	34 34 0	0 0 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	166 166 0	0 0 0	0 0 0	25 25 0	9 9 0
5/ 8/76	*	CAA	374 40	390 42	215 36	FLT IN NOT	TOT CLR CLR	32 31 1	0 0 0	20 19 1	0 0 0	0 0 0	1.6 0.0 52.2	.1 0.0 2.0	0. 0. 0.	351 365 64	0 0 0	0 0 0	22 21 1	10 10 0
5/ 8/76		CAA	350 39	370 41	215 37	FLT IN NOT	TOT CLR CLR	27 24 3	0 0 0	16 15 1	0 0 0	0 0 0	.6 0.0 5.0	.3 0.0 2.3	0. 0. 0.	259 272 64	0 0 0	0 0 0	27 24 3	0 0 0
5/14/76		CAA	351 40	370 42	211 37	FLT IN NOT	TOT CLR CLR	24 24 0	0 0 0	14 14 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	113 113 0	0 0 0	0 0 0	24 24 0	0 0 0
5/14/76	*	CAA	373 39	390 42	215 36	FLT IN NOT	TOT CLR CLR	27 26 1	0 0 0	17 16 1	23 22 1	2 1 1	1.2 0.0 32.2	.3 0.0 7.0	0. 0. 0.	153 150 195	45 42 100	131 131 124	18 17 1	9 9 0
LAX-LHR																				
2/10/79	*	BBB	336 53	390 59	193 35	FLT IN NOT	TOT CLR CLR	96 69 27	0 0 0	63 45 18	50 36 14	10 4 6	13.8 0.0 49.0	.8 0.0 2.7	0. 0. 0.	190 244 56	51 38 82	27 25 31	54 27 27	42 42 0
5/21/79		BDB	352 53	371 62	286 35	FLT IN NOT	TOT CLR CLR	111 110 1	111 110 1	72 71 1	54 53 1	0 0 0	.0 0.0 1.6	.0 0.0 2.0	.254E+04 .135E+04 .133E+06	383 387 164	32 31 84	46 46 30	31 31 0	80 79 1
11/15/78		BBB	349 48	370 57	250 34	FLT IN NOT	TOT CLR CLR	102 97 5	102 97 5	67 63 4	53 50 3	3 1 2	.5 0.0 10.4	.1 0.0 2.2	.571E+01 .601E+01 0.	186 194 57	28 24 96	57 55 90	35 30 5	67 67 0
11/17/78	*	BBB	350 59	390 70	260 35	FLT IN NOT	TOT CLR CLR	113 103 10	113 103 10	64 64 0	63 56 7	2 0 2	5.2 0.0 58.6	.2 0.0 2.6	.133E+05 .827E+01 .150E+C6	256 256 0	37 31 88	28 15 132	27 17 10	86 86 0

APPENDIX B

DEP-ARR IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS							AVERAGES FOR THE FLIGHT		TROP			STRAT		
							CLD	PD5	OZ	H2O	H2S	ATIC	PATCHES	PD5	OZ	RH	H2O	N	N
LAX-LHR (CONT.)																			
11/18/78	BBB	333 53	371 61	240 35	FLT	TOT:	98	98	66	44	4	9.8	.8	.255E+05	178	45	32	39	59
					IN	CLR:	80	80	52	35	3	0.0	0.0	.141E+03	206	37	27	25	55
					NOT	CLR:	18	18	14	9	1	53.4	4.4	.138E+06	78	78	50	14	4
11/19/78 *	BBB	343 61	370 73	208 35	FLT	TOT:	109	109	71	54	1	2.4	.2	.583E+04	213	38	10	13	96
					IN	CLR:	100	100	65	51	0	0.0	0.0	.297E+02	226	35	10	7	93
					NOT	CLR:	9	9	6	3	1	28.8	2.3	.703E+05	70	85	14	6	3
11/20/78	BBB	344 46	370 53	263 35	FLT	TOT:	100	100	65	56	5	1.6	.2	.164E+04	108	45	30	69	31
					IN	CLR:	92	92	59	51	5	0.0	0.0	.286E+01	114	44	29	61	31
					NOT	CLR:	8	8	6	5	0	19.9	2.1	.204E+05	45	60	32	8	0
12/ 9/78	BBB	344 50	370 56	262 35	FLT	TOT:	112	112	73	56	2	1.7	.3	.611E+04	229	33	29	28	84
					IN	CLR:	107	107	70	54	1	0.0	0.0	.650E+02	237	30	29	23	84
					NOT	CLR:	5	5	3	2	1	37.3	6.4	.135E+06	44	96	51	5	0
12/14/78	BBB	346 46	370 53	208 35	FLT	TOT:	105	105	66	49	11	5.8	.7	.293E+05	210	50	39	35	70
					IN	CLR:	90	90	59	42	5	0.0	0.0	.206E+03	227	42	30	23	67
					NOT	CLR:	15	15	7	7	6	40.3	4.7	.204E+06	64	98	92	12	3
LAX-NRT																			
2/17/79 *	BBB	326 40	331 42	248 35	FLT	TOT:	94	0	62	50	0	11.5	1.0	0.	92	40	24	94	0
					IN	CLR:	73	0	48	39	0	0.0	0.0	0.	104	27	19	73	0
					NOT	CLR:	21	0	14	11	0	51.5	4.3	0.	49	85	42	21	0
5/25/79 *	BDB	347 39	370 41	245 35	FLT	TOT:	98	98	62	47	13	4.7	.5	.635E+05	133	63	103	83	15
					IN	CLR:	77	77	47	36	5	0.0	0.0	.961E+04	150	53	94	62	15
					NOT	CLR:	21	21	15	11	8	21.9	2.5	.261E+06	82	97	135	21	0
5/31/79 *	BDB	348 41	370 44	191 34	FLT	TOT:	101	101	65	48	8	4.4	.4	.634E+05	141	53	75	85	16
					IN	CLR:	83	83	52	39	2	0.0	0.0	.193E+05	166	44	51	67	16
					NOT	CLR:	18	18	13	9	6	24.5	2.1	.267E+06	42	92	180	18	0
11/ 3/78 *	BBB	348 44	370 50	252 35	FLT	TOT:	82	82	54	44	9	21.8	1.6	.572E+05	86	58	40	71	11
					IN	CLR:	47	47	31	27	1	0.0	0.0	.281E+03	109	38	31	38	9
					NOT	CLR:	35	35	23	17	8	51.0	3.7	.134E+06	56	90	53	33	2
12/ 9/78 *	BBB	349 39	370 41	238 35	FLT	TOT:	94	94	63	51	9	3.0	.3	.322E+04	125	55	21	50	44
					IN	CLR:	84	84	57	45	6	0.0	0.0	.495E+02	130	52	20	46	38
					NOT	CLR:	10	10	6	6	3	28.1	3.0	.298E+05	84	76	27	4	6
12/27/78 *	BBB	338 37	371 39	222 35	FLT	TOT:	104	104	0	45	0	1.2	.2	.241E+05	0	26	26	0	0
					IN	CLR:	102	102	0	45	0	0.0	0.0	.174E+04	0	26	26	0	0
					NOT	CLR:	2	2	0	0	0	62.4	9.5	.116E+07	0	0	0	0	0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ			RH H2O			TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							N	N	
LAX-ORD																						
1/30/76	*	CAA	384 39	411 42	210 35	FLT IN NOT	TOT: CLR: CLR:	29 26 3	0 0 0	29 26 3	25 23 2	2 1 1	6.1 0.0 58.6	.1 0.0 .7	0. 0. 0.	285 308 90	29 27 60	36 37 27	3 1 2	26 25 1		
2/11/76	*	CAA	376 39	390 42	217 35	FLT IN NOT	TOT: CLR: CLR:	24 24 0	0 0 0	24 24 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	188 188 0	0 0 0	0 0 0	9 9 0	15 15 0		
2/11/76		CAA	386 37	410 41	268 34	FLT IN NOT	TOT: CLR: CLR:	17 17 0	0 0 0	17 17 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	173 173 0	0 0 0	0 0 0	4 4 0	13 13 0		
2/13/76		CAA	354 38	371 41	218 34	FLT IN NOT	TOT: CLR: CLR:	18 18 0	0 0 0	18 18 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	180 180 0	0 0 0	0 0 0	2 2 0	16 16 0		
2/13/76	*	CAA	382 39	390 42	290 35	FLT IN NOT	TOT: CLR: CLR:	25 25 0	0 0 0	25 25 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	130 130 0	0 0 0	0 0 0	2 2 0	23 23 0		
2/27/76		CAA	330 39	370 41	209 34	FLT IN NOT	TOT: CLR: CLR:	21 2 19	0 0 0	21 2 19	21 2 19	2 2 19	59.7 0.0 66.0	1.9 0.0 2.1	0. 0. 0.	39 19 41	100 100 100	137 584 90	21 2 19	0 0 0		
2/13/79	*	CAB	370 38	391 41	211 34	FLT IN NOT	TOT: CLR: CLR:	38 27 11	38 27 11	25 18 7	20 15 5	4 0 4	9.0 0.0 31.0	.9 0.0 3.0	.587E+05 .269E+03 .202E+06	54 61 35	73 63 100	63 52 96	38 27 11	0 0 0		
2/21/79	*	CAB	372 39	391 42	239 34	FLT IN NOT	TOT: CLR: CLR:	40 31 9	40 31 9	25 20 5	20 17 3	15 12 3	7.6 0.0 33.6	.4 0.0 1.8	.224E+05 .504E+02 .994E+05	286 344 57	91 89 100	68 74 35	16 7 9	24 24 0		
2/25/79		CAB	333 39	371 41	201 36	FLT IN NOT	TOT: CLR: CLR:	40 31 9	40 31 9	26 21 5	19 15 4	12 8 4	5.5 0.0 24.5	.5 0.0 2.0	.112E+05 .235E+04 .415E+05	102 104 93	79 74 100	127 152 31	35 26 9	5 5 0		
2/26/79	*	CAB	344 39	379 42	236 34	FLT IN NOT	TOT: CLR: CLR:	28 24 4	28 24 4	19 17 2	16 13 3	3 2 1	5.4 0.0 37.8	.2 0.0 1.5	.797E+04 .451E+03 .530E+05	153 165 50	84 83 91	47 51 30	25 21 4	3 3 0		
3/ 6/76		CAA	348 38	370 41	203 34	FLT IN NOT	TOT: CLR: CLR:	21 21 0	0 0 0	21 21 0	5 5 0	5 5 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	197 197 0	60 60 0	82 82 0	13 13 0	8 8 0		
3/ 6/76	*	CAA	388 40	411 42	215 35	FLT IN NOT	TOT: CLR: CLR:	22 22 0	0 0 0	22 22 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	348 348 0	28 28 0	32 32 0	2 2 0	20 20 0		
3/ 1/79		CAB	358 39	370 41	246 35	FLT IN NOT	TOT: CLR: CLR:	25 12 13	25 12 13	13 6 7	11 6 5	10 5 5	24.9 0.0 48.0	1.2 0.0 2.3	.478E+05 .119E+04 .909E+05	181 278 38	100 100 100	39 55 20	5 1 4	20 11 9		

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS				AVERAGES FOR THE FLIGHT			PD5	OZ	RH	H2O	TROP N	STRAT N
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES							
LAX-ORD (CONT.)																				
3/ 6/79	*	CAB	385 39	391 42	321 35	FLT TOT: IN CLR: NOT CLR:	30 30 0	30 30 0	18 18 0	16 16 0	13 13 0	0.0 0.0 0.0	0.0 0.0 0.0	.113E+03 .113E+03 0.	413 413 0	90 90 0	80 80 0	1 1 0		29 29 0
3/ 7/79	*	CAB	359 40	390 42	272 34	FLT TOT: IN CLR: NOT CLR:	7 7 0	7 7 0	3 3 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.607E+02 .607E+02 0.	623 623 0	0 0 0	0 0 0	1 1 0		6 6 0
3/ 7/79		CAB	344 38	371 41	230 35	FLT TOT: IN CLR: NOT CLR:	11 11 0	9 9 0	6 6 0	4 4 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.166E+03 .166E+03 0.	107 107 0	78 78 0	78 78 0	10 10 0		1 1 0
3/10/79		CAB	331 37	370 41	201 34	FLT TOT: IN CLR: NOT CLR:	11 11 0	10 10 0	5 5 0	6 6 0	2 2 0	0.0 0.0 0.0	0.0 0.0 0.0	.422E+03 .422E+03 0.	303 303 0	57 57 0	116 116 0	9 9 0		2 2 0
3/11/79	*	CAB	383 39	390 41	284 35	FLT TOT: IN CLR: NOT CLR:	29 28 1	29 28 1	19 18 1	18 17 1	6 6 0	3.4 0.0 98.8	.0 0.0 1.0	.633E+04 .560E+02 .182E+06	160 164 84	84 86 63	64 61 110	4 3 1		25 25 0
3/15/79	*	CAB	358 38	391 42	229 34	FLT TOT: IN CLR: NOT CLR:	36 30 6	36 30 6	20 18 2	20 16 4	3 2 1	2.3 0.0 13.5	.4 0.0 2.7	.333E+05 .707E+04 .165E+06	191 193 171	74 75 74	36 25 78	0 0 0		0 0 0
3/17/79	*	CAB	373 39	391 42	220 34	FLT TOT: IN CLR: NOT CLR:	36 26 10	36 26 10	22 16 6	18 16 2	3 1 2	13.6 0.0 48.9	.4 0.0 1.3	.248E+05 .301E+03 .886E+05	365 463 104	54 48 100	34 33 39	13 3 10		23 23 0
3/20/79	*	CAB	361 38	390 42	211 34	FLT TOT: IN CLR: NOT CLR:	36 24 12	36 24 12	24 16 8	21 14 7	7 1 6	15.8 0.0 47.5	.7 0.0 2.2	.372E+05 .277E+03 .111E+06	278 391 51	62 46 94	56 48 72	11 6 5		25 18 7
3/26/79		CAB	363 38	391 41	240 35	FLT TOT: IN CLR: NOT CLR:	30 29 1	30 29 1	19 18 1	14 14 0	1 0 0	.3 0.0 8.2	.2 0.0 6.0	.873E+03 .800E+03 .299E+04	226 236 60	59 59 0	29 29 0	16 15 1		14 14 0
3/29/79		CAB	359 38	371 42	194 34	FLT TOT: IN CLR: NOT CLR:	31 29 2	31 29 2	20 19 1	13 13 0	3 3 0	3.9 0.0 60.4	.2 0.0 2.5	.192E+05 .743E+03 .287E+06	261 270 89	84 84 0	55 55 0	16 14 2		15 15 0
4/29/76	*	CAA	367 40	390 42	216 39	FLT TOT: IN CLR: NOT CLR:	9 9 0	0 0 0	9 9 0	9 9 0	8 8 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	183 183 0	95 95 0	77 77 0	9 9 0		0 0 0
5/ 1/76		CAA	362 39	371 42	252 34	FLT TOT: IN CLR: NOT CLR:	35 35 0	0 0 0	11 11 0	28 28 0	14 14 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	129 129 0	85 85 0	45 45 0	27 27 0		8 8 0
5/ 1/76	*	CAA	343 39	351 42	218 35	FLT TOT: IN CLR: NOT CLR:	27 27 0	0 0 0	18 18 0	22 22 0	13 13 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	140 140 0	90 90 0	57 57 0	27 27 0		0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5						
LAX-ORD (CONT.)																			
5/ 3/76	CAA	358 38	370 41	209 34	FLT TOT: IN CLR: NOT CLR:	33 12 21	0 0 0	18 4 14	27 9 18	21 3 18	20.8 0.0 32.7	1.4 0.0 2.2	0. 0. 0.	104 100 106	88 65 100	47 89 26	29 8 21	4 4 0	
5/ 3/76 *	CAA	375 39	390 42	215 35	FLT TOT: IN CLR: NOT CLR:	36 26 10	0 0 0	15 9 6	28 20 8	22 14 8	8.3 0.0 29.9	.4 0.0 1.6	0. 0. 0.	231 283 152	91 88 100	51 40 78	30 20 10	6 6 0	
5/ 4/76 *	CAA	375 39	390 42	192 34	FLT TOT: IN CLR: NOT CLR:	39 25 14	0 0 0	17 11 6	0 0 0	0 0 0	9.4 0.0 26.1	1.0 0.0 2.9	0. 0. 0.	242 299 137	0 0 0	0 0 0	39 25 14	0 0 0	
5/ 4/76	CAA	385 39	410 42	218 34	FLT TOT: IN CLR: NOT CLR:	34 31 3	0 0 0	11 11 0	27 24 3	19 16 3	.4 0.0 4.4	.2 0.0 2.3	0. 0. 0.	374 374 0	95 94 100	28 22 76	16 13 3	18 18 0	
5/ 5/76	CAA	358 38	410 41	209 34	FLT TOT: IN CLR: NOT CLR:	27 11 16	0 0 0	15 5 10	0 0 0	0 0 0	15.1 0.0 25.6	1.2 0.0 2.1	0. 0. 0.	175 262 131	0 0 0	0 0 0	27 11 16	0 0 0	
5/31/79 *	CAB	385 38	391 42	282 34	FLT TOT: IN CLR: NOT CLR:	35 32 3	35 32 3	0 0 0	6 6 0	0 0 0	.7 0.0 8.0	.1 0.0 1.3	.147E+04 .495E+03 .119E+05	0 0 0	56 56 0	50 50 0	6 4 2	29 28 1	
6/18/78	CAB	363 39	371 41	281 35	FLT TOT: IN CLR: NOT CLR:	30 15 15	30 15 15	19 9 10	16 10 6	2 0 2	19.9 0.0 39.7	1.4 0.0 2.9	.240E+05 .125E+04 .467E+05	59 76 43	69 53 95	97 50 175	30 15 15	0 0 0	
6/21/78 *	CAB	345 37	351 41	236 34	FLT TOT: IN CLR: NOT CLR:	36 35 1	36 35 1	22 22 0	21 21 0	0 0 0	.1 0.0 2.0	.0 0.0 1.0	.257E+03 .179E+03 .299E+04	53 53 0	41 41 0	81 81 0	36 35 1	0 0 0	
6/29/78 *	CAB	342 38	352 41	218 34	FLT TOT: IN CLR: NOT CLR:	31 28 3	31 28 3	20 18 2	16 16 0	0 0 0	.8 0.0 8.2	.5 0.0 4.7	.201E+03 .214E+03 .850E+02	80 81 68	28 28 0	59 59 0	31 28 3	0 0 0	
6/ 1/79	CAB	364 39	370 41	299 35	FLT TOT: IN CLR: NOT CLR:	30 27 3	30 27 3	0 0 0	16 14 2	1 1 0	4.3 0.0 42.6	.4 0.0 4.0	.686E+04 .286E+04 .429E+05	0 0 0	64 60 90	45 44 47	20 17 3	10 10 0	
7/ 3/78 *	CAB	374 38	391 41	201 34	FLT TOT: IN CLR: NOT CLR:	36 36 0	36 36 0	16 16 0	21 21 0	4 4 0	0.0 0.0 0.0	0.0 0.0 0.0	.156E+02 .156E+02 0.	90 90 0	57 57 0	65 65 0	36 36 0	0 0 0	
7/18/78 *	CAB	352 38	391 41	196 34	FLT TOT: IN CLR: NOT CLR:	35 32 3	35 32 3	22 21 1	8 8 0	4 4 0	.4 0.0 4.3	.2 0.0 2.3	.617E+03 .424E+02 .675E+04	97 98 92	68 68 0	533 533 0	35 32 3	0 0 0	

APPENDIX B

DEP-ARR IM/1D/1Y	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	OZ	RH	H2O	TROP	STRAT		
					CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5				N	N		
LAX-PIK																			
11/10/78	BBB	330 50	369 56	232 35	FLT IN NOT	TOT CLR CLR	90 40 50	90 40 50	58 26 32	51 25 26	7 0 7	23.7 0.0 42.7	2.3 0.0 4.1	.103E+06 .102E+04 .195E+06	104 180 42	61 32 90	57 25 88	57 10 47	33 30 3
LAX-PPT																			
5/13/79	BDB	360 8	391 32	246 -16	FLT IN NOT	TOT CLR CLR	86 75 11	86 75 11	0 0 0	42 38 4	4 1 3	2.7 0.0 21.4	.5 0.0 3.6	.656E+05 .825E+03 .507E+06	0 0 0	47 43 90	113 59 623	86 75 11	0 0 0
5/27/79 *	BDB	364 9	370 33	265 -14	FLT IN NOT	TOT CLR CLR	80 72 8	80 72 8	54 49 5	34 30 4	2 0 2	4.0 0.0 39.6	.7 0.0 7.4	.732E+05 .174E+03 .730E+06	56 58 36	31 25 73	43 32 124	80 72 8	0 0 0
10/22/78	BBB	371 7	390 32	251 -15	FLT IN NOT	TOT CLR CLR	76 66 10	76 66 10	47 40 7	0 0 0	0 0 0	7.0 0.0 53.1	.5 0.0 4.0	.185E+05 .691E+01 .141E+06	43 46 22	0 0 0	0 0 0	76 66 10	0 0 0
11/ 5/78 *	BBB	378 9	410 33	248 -15	FLT IN NOT	TOT CLR CLR	80 72 8	80 72 8	50 46 4	36 33 3	5 2 3	2.1 0.0 21.3	.4 0.0 3.6	.412E+04 .363E+02 .403E+05	58 61 21	43 38 100	56 50 117	80 72 8	0 0 0
12/11/77	BCB	373 8	390 33	258 -15	FLT IN NOT	TOT CLR CLR	80 66 14	80 66 14	49 40 9	0 0 0	0 0 0	8.0 0.0 45.7	0.0 0.0 0.0	.280E+05 .197E+02 .160E+06	32 33 23	0 0 0	0 0 0	80 66 14	0 0 0
12/18/77 *	BCB	374 9	391 33	290 -14	FLT IN NOT	TOT CLR CLR	76 59 17	76 59 17	51 40 11	0 0 0	0 0 0	8.9 0.0 39.6	0.0 0.0 0.0	.294E+05 .136E+03 .131E+06	35 37 28	0 0 0	0 0 0	76 59 17	0 0 0
LAX-SEA																			
6/ 4/77	AAA	380 42	390 47	253 36	FLT IN NOT	TOT CLR CLR	15 12 3	15 12 3	8 6 2	0 0 0	0 0 0	1.3 0.0 6.5	.6 0.0 3.0	.926E+02 .329E+02 .331E+03	42 50 20	0 0 0	0 0 0	15 12 3	0 0 0
LAX-SFO																			
1/18/78	ABB	340 36	350 37	303 34	FLT IN NOT	TOT CLR CLR	5 4 1	5 4 1	0 0 0	2 2 0	0 0 0	.9 0.0 4.7	.4 0.0 2.0	.131E+02 .815E+01 .330E+02	0 0 0	60 60 0	87 87 0	5 4 1	0 0 0
2/11/79 *	CAB	274 35	331 36	201 34	FLT IN NOT	TOT CLR CLR	6 3 3	6 3 3	3 2 1	3 1 2	1 0 1	3.5 0.0 7.1	.8 0.0 1.7	.247E+05 .105E+04 .484E+05	42 47 33	54 22 70	131 132 131	6 3 3	0 0 0
2/17/79	BBB	310 36	351 37	200 35	FLT IN NOT	TOT CLR CLR	5 1 4	0 0 0	2 0 2	3 0 3	1 0 1	21.3 0.0 26.7	2.8 0.0 3.5	0. 0. 0.	54 0 54	78 0 78	32 0 32	5 1 4	0 0 0

APPENDIX B



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS			AVERAGES FOR THE FLIGHT								
								CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	TROP N	STRAT N
LAX-SFO (CONT.)																			
5/	1/76	* BBA	269 36	292 37	214 35	FLT TOT:	6	0	2	0	0	0.0	0.0	0.	116	0	0	6	0
						IN CLR:	6	0	2	0	0	0.0	0.0	0.	116	0	0	6	0
						NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/	2/78	* ABB	333 36	370 37	219 35	FLT TOT:	5	5	0	1	0	0.0	0.0	.112E+02	0	20	292	5	0
						IN CLR:	5	5	0	1	0	0.0	0.0	.112E+02	0	20	292	5	0
						NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
5/	5/78	* ABB	323 36	370 37	186 34	FLT TOT:	5	5	0	1	0	22.7	.6	.346E+05	0	12	428	5	0
						IN CLR:	3	3	0	1	0	0.0	0.0	.130E+03	0	12	428	3	0
						NOT CLR:	2	2	0	0	0	56.7	1.5	.862E+05	0	0	0	2	0
9/	1/76	* BBA	275 36	289 37	225 35	FLT TOT:	5	0	3	0	0	0.0	0.0	0.	31	0	0	5	0
						IN CLR:	5	0	3	0	0	0.0	0.0	0.	31	0	0	5	0
						NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
10/24/78		BBB	334 35	350 36	299 35	FLT TOT:	5	5	2	0	0	0.0	0.0	.266E+02	57	0	0	5	0
						IN CLR:	5	5	2	0	0	0.0	0.0	.266E+02	57	0	0	5	0
						NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
11/	5/78	BBB	324 35	350 36	265 35	FLT TOT:	5	5	2	2	1	44.1	3.2	.830E+05	35	100	73	5	0
						IN CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
						NOT CLR:	5	5	2	2	1	44.1	3.2	.830E+05	35	100	73	5	0
12/11/77	* BCB		271 36	291 37	195 35	FLT TOT:	5	5	2	0	0	3.1	0.0	.526E+04	35	0	0	5	0
						IN CLR:	3	3	1	0	0	0.0	0.0	0.	45	0	0	3	0
						NOT CLR:	2	2	1	0	0	7.6	0.0	.132E+05	24	0	0	2	0
12/18/77	BCB		305 36	350 37	203 34	FLT TOT:	7	7	4	0	0	1.1	0.0	.103E+04	52	0	0	7	0
						IN CLR:	5	5	3	0	0	0.0	0.0	.143E+04	54	0	0	5	0
						NOT CLR:	2	2	1	0	0	3.7	0.0	.334E+02	45	0	0	2	0
12/27/78	BBB		336 35	351 36	312 35	FLT TOT:	5	5	0	3	0	.2	.2	.930E+02	0	61	48	0	0
						IN CLR:	4	4	0	3	0	0.0	0.0	.116E+03	0	61	48	0	0
						NOT CLR:	1	1	0	0	0	1.2	1.0	0.	0	0	0	0	0
LHR-LPA																			
12/13/78	BBB		384 33	390 37	301 29	FLT TOT:	16	16	2	7	4	7.9	1.4	.339E+05	16	97	30	16	0
						IN CLR:	8	8	1	4	1	0.0	0.0	.108E+03	31	94	29	8	0
						NOT CLR:	8	8	1	3	3	15.9	2.9	.677E+05	1	100	33	8	0
LHR-PIK																			
11/11/78	* BBB		230 53	230 54	229 52	FLT TOT:	6	6	3	3	0	0.0	0.0	.111E+02	38	49	272	6	0
						IN CLR:	6	6	3	3	0	0.0	0.0	.111E+02	38	49	272	6	0
						NOT CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS			NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT
								CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
LHR-SEA																				
2/18/79	*	BBB	339 62	370 69	255 49	FLT	TOT:	91	0	57	42	3	19.2	1.0	0.	168	50	17	48	43
						IN	CLR:	58	0	36	25	0	0.0	0.0	0.	231	36	10	19	39
						NOT	CLR:	33	0	21	17	3	53.0	2.9	0.	60	71	27	29	4
2/18/79		BBB	339 61	351 68	230 48	FLT	TOT:	94	0	61	53	1	2.7	.5	0.	205	41	21	22	72
						IN	CLR:	83	0	53	47	1	0.0	0.0	0.	225	38	18	15	68
						NOT	CLR:	11	0	6	6	0	23.1	4.4	0.	68	65	41	7	4
3/25/76	*	BBA	343 60	371 64	223 50	FLT	TOT:	53	0	53	0	0	.3	.1	0.	398	0	0	7	46
						IN	CLR:	47	0	47	0	0	0.0	0.0	0.	405	0	0	6	41
						NOT	CLR:	6	0	6	0	0	2.6	1.0	0.	347	0	0	1	5
3/26/76		BBA	343 65	391 76	224 48	FLT	TOT:	65	0	65	0	0	.1	.1	0.	430	0	0	32	33
						IN	CLR:	60	0	60	0	0	0.0	0.0	0.	427	0	0	29	31
						NOT	CLR:	5	0	5	0	0	.9	1.6	0.	466	0	0	3	2
4/22/76		BBA	359 61	371 69	291 49	FLT	TOT:	62	0	62	0	0	.9	.2	0.	452	0	0	17	45
						IN	CLR:	58	0	58	0	0	0.0	0.0	0.	477	0	0	13	45
						NOT	CLR:	4	0	4	0	0	14.1	2.8	0.	79	0	0	4	0
4/29/76	*	BBA	345 62	371 69	203 49	FLT	TOT:	61	0	61	0	0	1.4	.2	0.	443	0	0	26	35
						IN	CLR:	56	0	56	0	0	0.0	0.0	0.	464	0	0	22	34
						NOT	CLR:	5	0	5	0	0	17.6	2.2	0.	203	0	0	4	1
4/30/76		BBA	349 62	371 70	206 49	FLT	TOT:	66	0	66	0	0	14.9	.5	0.	345	0	0	33	33
						IN	CLR:	52	0	52	0	0	0.0	0.0	0.	414	0	0	19	33
						NOT	CLR:	14	0	14	0	0	70.4	2.6	0.	90	0	0	14	0
6/10/77		AAA	396 63	429 70	283 48	FLT	TOT:	94	94	59	0	0	0.0	0.0	.612E+01	512	0	0	4	90
						IN	CLR:	94	94	59	0	0	0.0	0.0	.612E+01	512	0	0	4	90
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
6/11/77	*	AAA	397 60	410 65	295 48	FLT	TOT:	83	83	55	0	0	1.8	.3	.668E+04	431	0	0	7	76
						IN	CLR:	76	76	51	0	0	0.0	0.0	.690E+01	459	0	0	1	75
						NOT	CLR:	7	7	4	0	0	21.7	3.4	.791E+05	81	0	0	6	1
6/12/77		AAA	402 64	430 73	304 49	FLT	TOT:	90	90	59	0	0	.5	.0	.488E+03	424	0	0	1	89
						IN	CLR:	88	88	56	0	0	0.0	0.0	.705E+00	424	0	0	0	88
						NOT	CLR:	2	2	1	0	0	22.9	2.0	.219E+05	447	0	0	1	1
6/13/77	*	AAA	390 58	411 64	249 48	FLT	TOT:	89	89	56	0	0	2.5	.2	.446E+05	389	0	0	5	84
						IN	CLR:	85	85	54	0	0	0.0	0.0	.294E+02	401	0	0	1	84
						NOT	CLR:	4	4	2	0	0	56.5	4.5	.992E+06	50	0	0	4	0
6/17/77		ACA	387 62	391 69	195 48	FLT	TOT:	100	100	66	0	0	.3	0.0	.229E+03	543	0	0	9	91
						IN	CLR:	98	98	65	0	0	0.0	0.0	.135E+03	550	0	0	7	91
						NOT	CLR:	2	2	1	0	0	16.1	0.0	.484E+04	101	0	0	2	0
6/18/77	*	ACA	377 63	391 68	269 51	FLT	TOT:	83	83	56	0	0	.1	0.0	.233E+03	528	0	0	3	80
						IN	CLR:	81	81	54	0	0	0.0	0.0	.187E+03	533	0	0	2	79
						NOT	CLR:	2	2	2	0	0	3.3	0.0	.213E+04	388	0	0	1	1

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT					TRCP	STRAT	
							CLD	PD5	QZ	H2O	H2S	ATIC	PATCHES	PD5	QZ	RH	H2O	N	N
LHR-SEA (CONT.)																			
6/19/77	ACA	402 59	430 62	301 52	FLT TOT: IN CLR: NOT CLR:	67 67 0	67 67 0	38 38 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.608E+02 .608E+02 0.	526 526 0	0 0 0	0 0 0	2 2 0	65 65 0
6/20/77	* ACA	391 64	410 69	356 53	FLT TOT: IN CLR: NOT CLR:	78 77 1	78 77 1	44 44 0	0 0 0	0 0 0	0 0 0	1.1 0.0 83.1	0.0 0.0 0.0	.716E+04 .132E+03 .548E+06	553 553 0	0 0 0	0 0 0	5 5 0	73 72 1
6/21/77	ACA	400 62	430 68	195 49	FLT TOT: IN CLR: NOT CLR:	96 95 1	96 95 1	61 60 1	0 0 0	0 0 0	0 0 0	0.0 0.0 3.5	0.0 0.0 0.0	.122E+03 .561E+02 .643E+04	491 495 252	0 0 0	0 0 0	5 5 0	91 90 1
6/22/77	* ACA	394 62	410 59	289 48	FLT TOT: IN CLR: NOT CLR:	89 89 0	89 89 0	60 60 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.600E+02 .600E+02 0.	481 481 0	0 0 0	0 0 0	16 16 0	73 73 0
6/25/77	* ACA	392 61	410 67	245 49	FLT TOT: IN CLR: NOT CLR:	92 92 0	92 92 0	56 56 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.699E+02 .699E+02 0.	484 484 0	0 0 0	0 0 0	10 10 0	82 82 0
6/26/77	ACA	401 65	430 77	185 48	FLT TOT: IN CLR: NOT CLR:	90 90 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	2 2 0	88 88 0
6/27/77	* ACA	393 60	410 67	299 48	FLT TOT: IN CLR: NOT CLR:	89 88 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 .4	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	3 3 0	86 85 1
6/28/77	ACA	387 64	410 73	304 49	FLT TOT: IN CLR: NOT CLR:	97 92 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1.8 0.0 34.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	4 0 4	93 92 1
6/29/77	* ACA	395 57	410 51	296 48	FLT TOT: IN CLR: NOT CLR:	39 36 3	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1.0 0.0 30.6	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	7 4 3	82 82 0
10/ 8/78	BBB	341 62	390 70	251 45	FLT TOT: IN CLR: NOT CLR:	94 84 10	94 84 10	62 56 6	0 0 0	0 0 0	0 0 0	5.0 0.0 46.7	.3 0.0 2.9	.208E+05 .160E+03 .194E+06	159 168 75	0 0 0	0 0 0	53 44 9	41 40 1
10/ 9/78	* BBB	329 62	331 69	256 49	FLT TOT: IN CLR: NOT CLR:	83 52 31	83 52 31	55 34 21	0 0 0	0 0 0	0 0 0	15.7 0.0 42.1	1.1 0.0 2.9	.520E+05 .161E+02 .140E+06	139 189 58	0 0 0	0 0 0	52 21 31	31 31 0
10/20/78	BBB	328 60	390 68	256 49	FLT TOT: IN CLR: NOT CLR:	103 63 43	106 63 43	70 41 29	0 0 0	0 0 0	0 0 0	21.4 0.0 52.9	1.4 0.0 3.4	.645E+05 .220E+03 .159E+06	139 203 49	0 0 0	0 0 0	53 10 43	53 53 0
10/21/78	* BBB	328 58	331 61	254 48	FLT TOT: IN CLR: NOT CLR:	87 73 14	87 73 14	54 46 8	0 0 0	0 0 0	0 0 0	4.1 0.0 25.6	.5 0.0 3.1	.507E+05 .274E+02 .315E+06	178 199 54	0 0 0	0 0 0	39 25 14	48 48 0

APPENDIX B

DEP-ARR	IM/10/1Y	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT				TROP			STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
LHR-SEA (CONT.)																			
12/ 7/77	*	BCB	329 57	331 62	253 48	FLT IN NOT	TOT: CLR: CLR:	95 95 0	95 95 0	63 63 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.483E+01 .483E+01 0.	238 238 0	0 0 0	0 0 0	5 5 0	90 90 0
12/ 8/77		BCB	341 62	370 70	240 48	FLT IN NOT	TOT: CLR: CLR:	92 86 6	92 86 6	56 52 4	0 0 0	1.1 0.0 16.8	0.0 0.0 0.0	.366E+04 .539E+02 .554E+05	239 253 59	0 0 0	0 0 0	21 15 6	71 71 0
12/ 9/77	*	BCB	325 57	330 62	234 48	FLT IN NOT	TOT: CLR: CLR:	90 81 9	90 81 9	47 46 1	0 0 0	3.6 0.0 36.4	0.0 0.0 0.0	.262E+05 .889E+01 .262E+06	228 232 51	0 0 0	0 0 0	9 3 6	81 78 3
12/10/77		BCB	349 63	390 70	265 49	FLT IN NOT	TOT: CLR: CLR:	94 92 2	94 92 2	52 51 1	0 0 0	.2 0.0 9.2	0.0 0.0 0.0	.194E+04 .177E+01 .910E+05	249 252 93	0 0 0	0 0 0	10 10 0	84 82 2

## LHR-SFO

6/10/77	*	AAA	393 58	410 67	288 39	FLT IN NOT	TOT: CLR: CLR:	93 83 10	93 83 10	60 54 6	0 0 0	5.7 0.0 53.3	.3 0.0 2.7	.213E+05 .361E+02 .198E+06	444 487 58	0 0 0	0 0 0	14 4 10	79 79 0
6/11/77		AAA	387 59	410 69	267 38	FLT IN NOT	TOT: CLR: CLR:	105 103 2	105 103 2	67 67 0	0 0 0	.2 0.0 11.0	.1 0.0 3.0	.867E+01 .433E+01 .232E+03	426 426 0	0 0 0	0 0 0	2 0 2	103 103 0
6/12/77	*	AAA	394 54	411 64	285 38	FLT IN NOT	TOT: CLR: CLR:	94 83 11	94 83 11	63 55 8	0 0 0	2.9 0.0 25.2	.4 0.0 3.0	.133E+05 .489E+02 .113E+06	330 355 158	0 0 0	0 0 0	12 7 5	82 76 6
6/13/77		AAA	394 61	410 73	212 39	FLT IN NOT	TOT: CLR: CLR:	111 109 2	111 109 2	73 72 1	0 0 0	.4 0.0 23.1	.0 0.0 1.5	.126E+04 .465E+01 .695E+05	473 478 98	0 0 0	0 0 0	3 1 2	108 108 0
6/17/77	*	ACA	396 54	410 62	306 38	FLT IN NOT	TOT: CLR: CLR:	106 95 11	106 95 11	67 64 3	0 0 0	3.1 0.0 30.2	0.0 0.0 0.0	.258E+05 .181E+03 .247E+06	486 505 76	0 0 0	0 0 0	14 5 9	92 90 2
6/18/77		ACA	396 56	410 62	242 39	FLT IN NOT	TOT: CLR: CLR:	112 108 4	112 108 4	72 70 2	0 0 0	.4 0.0 11.9	0.0 0.0 0.0	.926E+03 .173E+03 .212E+05	471 481 119	0 0 0	0 0 0	12 10 2	100 98 2
6/19/77	*	ACA	392 58	411 67	250 39	FLT IN NOT	TOT: CLR: CLR:	98 89 9	98 89 9	65 61 4	0 0 0	2.2 0.0 24.0	0.0 0.0 0.0	.118E+05 .448E+02 .128E+06	464 485 150	0 0 0	0 0 0	18 11 7	80 78 2
6/20/77		ACA	387 58	393 67	194 38	FLT IN NOT	TOT: CLR: CLR:	110 96 14	110 96 14	74 65 9	0 0 0	3.8 0.0 30.1	0.0 0.0 0.0	.707E+04 .101E+03 .549E+05	451 491 160	0 0 0	0 0 0	19 9 10	91 87 4

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT		OZ	RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5						
LHR-SFO (CONT.)																			
6/21/77	*	ACA	392 53	410 60	275 38	FLT IN NOT	TOT: CLR: CLR:	94 76 18	94 76 18	60 47 13	0 0 0	8.7 0.0 45.5	0.0 0.0 0.0	.145E+06 .362E+03 .755E+06	427 500 162	0 0 0	0 0 0	32 14 18	62 62 0
6/22/77		ACA	384 58	410 67	263 38	FLT IN NOT	TOT: CLR: CLR:	111 110 1	111 110 1	71 70 1	0 0 0	.2 0.0 20.0	0.0 0.0 0.0	.499E+04 .122E+03 .540E+06	424 427 176	0 0 0	0 0 0	23 23 0	88 87 1
6/25/77		ACA	385 62	410 77	190 38	FLT IN NOT	TOT: CLR: CLR:	106 99 7	106 99 7	53 51 2	0 0 0	.9 0.0 14.0	0.0 0.0 0.0	.375E+04 .298E+02 .564E+05	507 512 379	0 0 0	0 0 0	20 14 6	86 85 1
6/26/77	*	ACA	385 58	411 67	291 39	FLT IN NOT	TOT: CLR: CLR:	95 87 8	0 0 0	0 0 0	0 0 0	2.4 0.0 28.3	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	18 10 8	77 77 0
6/27/77		ACA	381 60	410 70	254 38	FLT IN NOT	TOT: CLR: CLR:	114 107 7	0 0 0	0 0 0	0 0 0	2.1 0.0 34.1	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	21 14 7	93 93 0
6/28/77	*	ACA	384 57	410 65	241 39	FLT IN NOT	TOT: CLR: CLR:	99 97 2	0 0 0	0 0 0	0 0 0	1.2 0.0 59.2	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	19 17 2	80 80 0
6/29/77		ACA	365 60	410 69	220 39	FLT IN NOT	TOT: CLR: CLR:	107 95 12	0 0 0	0 0 0	0 0 0	3.8 0.0 34.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	20 9 11	87 86 1
10/28/77	*	ABB	384 66	430 88	290 40	FLT IN NOT	TOT: CLR: CLR:	42 41 1	0 0 0	0 0 0	0 0 0	1.6 0.0 65.5	.1 0.0 3.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	3 2 1	39 39 0
10/ 9/78		BBB	349 58	391 67	219 39	FLT IN NOT	TOT: CLR: CLR:	113 94 19	113 94 19	63 50 13	0 0 0	4.4 0.0 26.3	.4 0.0 2.6	.156E+05 .223E+03 .914E+05	141 166 46	0 0 0	0 0 0	67 49 18	46 45 1
10/10/78	*	BBB	329 58	372 67	203 39	FLT IN NOT	TOT: CLR: CLR:	95 69 26	95 69 26	61 45 16	0 0 0	13.3 0.0 48.5	.7 0.0 2.7	.530E+05 .344E+03 .193E+06	120 145 51	0 0 0	0 0 0	75 50 25	20 19 1
10/21/78		BBB	338 60	371 71	238 39	FLT IN NOT	TOT: CLR: CLR:	108 100 8	108 100 8	59 63 6	0 0 0	1.0 0.0 12.9	.2 0.0 3.3	.129E+04 .569E+02 .166E+05	223 238 57	0 0 0	0 0 0	28 20 8	80 80 0
MEL-PER																			
1/27/77		DDA	348 -35	350 -33	279 -38	FLT IN NOT	TOT: CLR: CLR:	36 36 0	36 36 0	16 16 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.117E+02 .117E+02 0.	84 84 0	0 0 0	0 0 0	36 36 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			02	RH	H2O	TROP N	STRAT N	
						CLD	FD5	02	H20	H2S	%TIC	PATCHES	PD5						
MEL-PER (CONT.)																			
1/29/77 *	DDA	359 -35	370 -33	201 -38	FLT IN NOT	TOT: CLR: CLR:	30 30 0	30 30 0	8 8 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.109E+02 .109E+02 0.	61 61 0	0 0 0	0 0 0	30 30 0	0 0 0
2/ 2/77	DDA	383 -35	390 -33	291 -38	FLT IN NOT	TOT: CLR: CLR:	35 34 1	35 34 1	12 12 0	0 0 0	0 0 0	.7 0.0 23.9	.3 0.0 10.0	.515E+04 .684E+01 .180E+06	79 79 0	0 0 0	0 0 0	35 34 1	0 0 0
2/16/77	DDA	382 -35	390 -33	244 -38	FLT IN NOT	TOT: CLR: CLR:	35 35 0	35 35 0	23 23 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.103E+02 .103E+02 0.	90 90 0	0 0 0	0 0 0	0 0 0	0 0 0
2/19/77 *	DDA	362 -35	371 -33	261 -36	FLT IN NOT	TOT: CLR: CLR:	30 29 1	30 29 1	19 18 1	0 0 0	0 0 0	.5 0.0 16.1	.1 0.0 2.0	.267E+02 .265E+02 .310E+02	92 94 66	0 0 0	0 0 0	0 0 0	0 0 0
12/28/76	DDA	343 -35	350 -33	197 -37	FLT IN NOT	TOT: CLR: CLR:	36 36 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	36 36 0	0 0 0
MEL-SIN																			
2/21/77	DDA	361 -20	390 0	265 -37	FLT IN NOT	TOT: CLR: CLR:	73 48 25	73 48 25	47 32 15	0 0 0	0 0 0	23.5 0.0 68.5	1.6 0.0 4.6	.173E+06 .106E+02 .506E+06	41 50 23	0 0 0	0 0 0	0 0 0	0 0 0
2/24/77 *	DDA	314 -20	350 0	235 -37	FLT IN NOT	TOT: CLR: CLR:	75 58 17	75 58 17	49 37 12	0 0 0	0 0 0	11.4 0.0 50.3	.6 0.0 2.5	.342E+05 .180E+02 .151E+06	44 53 16	0 0 0	0 0 0	0 0 0	0 0 0
12/ 4/76	DDA	340 -21	350 0	243 -37	FLT IN NOT	TOT: CLR: CLR:	79 48 31	0 0 0	0 0 0	0 0 0	0 0 0	12.0 0.0 30.7	1.8 0.0 4.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	79 48 31	0 0 0
12/ 6/76 *	DDA	319 -20	350 0	251 -37	FLT IN NOT	TOT: CLR: CLR:	71 53 18	0 0 0	0 0 0	0 0 0	0 0 0	5.5 0.0 21.6	1.2 0.0 4.6	0. 0. 0.	0 0 0	0 0 0	0 0 0	71 53 18	0 0 0
MEL-SYD																			
1/21/77 *	DDA	319 -36	351 -35	195 -37	FLT IN NOT	TOT: CLR: CLR:	7 7 0	7 7 0	3 3 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.461E+01 .461E+01 0.	117 117 0	0 0 0	0 0 0	7 7 0	0 0 0
1/22/77	DDA	345 -36	371 -35	284 -37	FLT IN NOT	TOT: CLR: CLR:	5 5 0	5 5 0	2 2 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.131E+02 .131E+02 0.	82 82 0	0 0 0	0 0 0	5 5 0	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N
							CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5					
MEL-SYD (CONT.)																			
1/29/77	DDA	313 -35	370 -34	220 -37	FLT TOT: IN CLR: NOT CLR:	7 2 5	7 2 5	3 1 2	0 0 0	0 0 0		43.8 0.0 61.3	3.3 0.0 4.6	.140E+06 .627E+03 .195E+06	57 24 74	0 0 0	0 0 0	7 2 5	0 0 0
2/15/77 *	DDA	329 -36	351 -35	285 -37	FLT TOT: IN CLR: NOT CLR:	6 6 0	6 6 0	3 3 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	.111E+02 .111E+02 0.	32 32 0	0 0 0	0 0 0	0 0 0	0 0 0
2/16/77 *	DDA	320 -36	350 -35	227 -37	FLT TOT: IN CLR: NOT CLR:	6 6 0	6 6 0	2 2 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	.535E+01 .535E+01 0.	61 61 0	0 0 0	0 0 0	0 0 0	0 0 0
2/16/77	DDA	335 -36	370 -35	271 -36	FLT TOT: IN CLR: NOT CLR:	5 5 0	5 5 0	3 3 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	.642E+01 .642E+01 0.	37 37 0	0 0 0	0 0 0	0 0 0	0 0 0
2/19/77	DDA	311 -36	330 -34	259 -37	FLT TOT: IN CLR: NOT CLR:	5 5 0	5 5 0	3 3 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	52 52 0	0 0 0	0 0 0	0 0 0	0 0 0
2/21/77 *	DDA	336 -36	351 -35	282 -37	FLT TOT: IN CLR: NOT CLR:	5 3 2	5 3 2	2 1 1	0 0 0	0 0 0		20.3 0.0 50.8	3.2 0.0 8.0	.531E+05 0. .133E+06	93 111 75	0 0 0	0 0 0	0 0 0	0 0 0
6/ 2/79	BDB	313 -35	331 -35	249 -36	FLT TOT: IN CLR: NOT CLR:	5 5 0	5 5 0	2 2 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	.149E+03 .149E+03 0.	70 70 0	0 0 0	0 0 0	5 5 0	0 0 0
6/ 2/79 *	BDB	373 -36	391 -35	328 -37	FLT TOT: IN CLR: NOT CLR:	6 6 0	6 6 0	3 3 0	3 3 0	1 1 0		0.0 0.0 0.0	0.0 0.0 0.0	.148E+03 .148E+03 0.	126 126 0	71 71 0	34 34 0	6 6 0	0 0 0
8/ 9/76 *	DDA	295 -36	334 -35	200 -37	FLT TOT: IN CLR: NOT CLR:	7 7 0	0 0 0	3 3 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	108 108 0	0 0 0	0 0 0	7 7 0	0 0 0
8/11/76	DDA	283 -35	290 -34	282 -36	FLT TOT: IN CLR: NOT CLR:	5 5 0	0 0 0	2 2 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	42 42 0	0 0 0	0 0 0	5 5 0	0 0 0
8/14/76 *	DDA	339 -36	350 -35	293 -37	FLT TOT: IN CLR: NOT CLR:	5 5 0	0 0 0	3 3 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	90 90 0	0 0 0	0 0 0	4 4 0	1 1 0
8/16/76	DDA	321 -35	370 -34	206 -36	FLT TOT: IN CLR: NOT CLR:	6 5 1	0 0 0	3 3 0	0 0 0	0 0 0		.7 0.0 4.3	.2 0.0 1.0	0. 0. 0.	94 94 0	0 0 0	0 0 0	4 3 1	2 2 0
8/24/76	DDA	300 -35	370 -34	219 -36	FLT TOT: IN CLR: NOT CLR:	8 8 0	0 0 0	4 4 0	0 0 0	0 0 0		0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	200 200 0	0 0 0	0 0 0	5 5 0	3 3 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			TROP			STRAT	
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N
MEL-SYD (CONT.)																		
8/31/76	DDA	344 -36	371 -35	297 -37	FLT IN NOT	TOT: CLR: CLR:	6 4 2	0 0 0	2 2 0	0 0 0	16.3 0.0 48.8	.7 0.0 2.0	0. 0. 0.	297 297 0	0 0 0	0 0 0	2 0 2	4 4 0
11/30/76 *	DDA	341 -36	350 -35	295 -37	FLT IN NOT	TOT: CLR: CLR:	6 6 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	6 6 0	0 0 0
11/14/78	BBB	295 -35	330 -34	189 -36	FLT IN NOT	TOT: CLR: CLR:	6 6 0	6 6 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	43 43 0	0 0 0	0 0 0	6 6 0	0 0 0
11/14/78 *	BBB	287 -36	310 -35	225 -37	FLT IN NOT	TOT: CLR: CLR:	6 6 0	6 6 0	3 3 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.107E+02 .107E+02 0.	38 38 0	0 0 0	0 0 0	6 6 0	0 0 0
12/ 1/76	DDA	318 -35	370 -34	201 -37	FLT IN NOT	TOT: CLR: CLR:	6 6 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	6 6 0	0 0 0
12/ 4/76 *	DDA	334 -36	350 -35	262 -37	FLT IN NOT	TOT: CLR: CLR:	8 8 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	8 8 0	0 0 0
12/ 6/76	DDA	284 -35	330 -34	219 -36	FLT IN NOT	TOT: CLR: CLR:	6 6 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	6 6 0	0 0 0
12/28/76 *	DDA	335 -36	351 -35	290 -37	FLT IN NOT	TOT: CLR: CLR:	7 7 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	7 7 0	0 0 0
12/30/76 *	DDA	328 -36	350 -35	242 -37	FLT IN NOT	TOT: CLR: CLR:	7 5 2	0 0 0	0 0 0	0 0 0	1.1 0.0 3.7	.3 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	7 5 2	0 0 0
12/31/76	DDA	301 -35	330 -34	190 -36	FLT IN NOT	TOT: CLR: CLR:	6 6 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	0. 0. 0.	0 0 0	0 0 0	0 0 0	6 6 0	0 0 0
12/16/77	BCB	289 -36	293 -35	281 -36	FLT IN NOT	TOT: CLR: CLR:	5 4 1	5 4 1	2 2 0	0 0 0	.4 0.0 2.0	0.0 0.0 0.0	.493E+03 .160E+02 .240E+04	32 32 0	0 0 0	0 0 0	5 4 1	0 0 0
12/16/77 *	BCB	358 -36	390 -35	290 -37	FLT IN NOT	TOT: CLR: CLR:	7 6 1	7 6 1	3 2 1	0 0 0	1.7 0.0 11.8	0.0 0.0 0.0	.454E+01 .530E+01 0.	150 155 139	0 0 0	0 0 0	7 6 1	0 0 0



DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT						TROP	STRAT	
						CLD	PD5	OZ	H20	H2S	%TIC	PATCHES	PD5	OZ	RH	H20	N	N	
MNL-SYD																			
1/	1/77	DDA	347 -10	396 12	221 -33	FLT IN NOT	TOT: CLR: CLR:	76 36 40	0 0 0	0 0 0	0 0 0	22.1 0.0 42.0	2.0 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	76 36 40	0 0 0
1/	1/77 *	DDA	340 -11	351 12	253 -33	FLT IN NOT	TOT: CLR: CLR:	75 29 46	0 0 0	0 0 0	0 0 0	25.7 0.0 41.8	2.1 0.0 3.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	75 29 46	0 0 0
1/	4/77 *	DDA	337 -11	351 12	257 -33	FLT IN NOT	TOT: CLR: CLR:	72 72 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	72 72 0	0 0 0
1/	4/77	DDA	343 -9	370 12	190 -33	FLT IN NOT	TOT: CLR: CLR:	78 53 25	0 0 0	0 0 0	0 0 0	17.3 0.0 54.1	1.1 0.0 3.5	0. 0. 0.	0 0 0	0 0 0	0 0 0	78 53 25	0 0 0
8/17/76 *	DDA	334 -10	351 12	256 -33	FLT IN NOT	TOT: CLR: CLR:	79 57 22	0 0 0	51 36 15	0 0 0	0 0 0	10.6 0.0 37.9	1.2 0.0 4.2	0. 0. 0.	29 33 18	0 0 0	0 0 0	79 57 22	0 0 0
8/17/76	DDA	347 -10	370 12	255 -33	FLT IN NOT	TOT: CLR: CLR:	77 61 16	0 0 0	52 44 8	0 0 0	0 0 0	7.1 0.0 34.0	.5 0.0 2.3	0. 0. 0.	32 35 18	0 0 0	0 0 0	77 61 16	0 0 0
MRU-PER																			
1/27/77 *	DDA	266 -23	267 -21	266 -25	FLT IN NOT	TOT: CLR: CLR:	14 14 0	14 14 0	9 9 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.872E+01 .872E+01 0.	76 76 0	0 0 0	0 0 0	14 14 0	0 0 0
1/28/77	DDA	314 -28	321 -21	245 -32	FLT IN NOT	TOT: CLR: CLR:	65 61 4	65 61 4	38 36 2	0 0 0	0 0 0	1.3 0.0 20.9	.0 0.0 .8	.301E+03 .103E+02 .473E+04	69 71 49	0 0 0	0 0 0	65 61 4	0 0 0
2/ 4/77	DDA	344 -28	370 -21	239 -32	FLT IN NOT	TOT: CLR: CLR:	68 62 6	68 62 6	4 4 0	0 0 0	0 0 0	3.5 0.0 39.3	3. 0.0 3.0	.159E+05 .621E+01 .180E+06	70 70 0	0 0 0	0 0 0	68 62 6	0 0 0
2/17/77 *	DDA	331 -28	361 -21	227 -32	FLT IN NOT	TOT: CLR: CLR:	69 69 0	69 69 0	46 46 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.630E+01 .630E+01 0.	53 53 0	0 0 0	0 0 0	0 0 0	0 0 0
2/18/77	DDA	360 -28	380 -21	218 -32	FLT IN NOT	TOT: CLR: CLR:	67 67 0	67 67 0	43 43 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.	.429E+01 .429E+01 0.	50 50 0	0 0 0	0 0 0	0 0 0	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR		THE FLIGHT			TROP			STRAT
								CLD	PD3	OZ	H2O,H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	H	N	
MUC-SNN																				
11/30/78		BBB	342 52	349 54	264 50	FLT IN NOT	TOT: CLR: CLR:	18 16 2	18 16 2	10 9 1	7 6 1	1 0 1	3.5 0.0 31.8	.3 0.0 2.5	.493E+05 .414E+01 .444E+06	145 147 130	50 42 100	15 12 32	3 1 2	15 15 0
NAN-SYD																				
1/ 5/77 *	DDA		324 -26	330 -19	239 -33	FLT IN NOT	TOT: CLR: CLR:	35 34 1	0 0 0	0 0 0	0 0 0	0 0 0	.0 0.0 .4	.0 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	35 34 1	0 0 0
1/ 6/77	DDA		346 -27	350 -19	266 -33	FLT IN NOT	TOT: CLR: CLR:	38 31 7	0 0 0	0 0 0	0 0 0	0 0 0	14.6 0.0 79.3	1.1 0.0 6.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	38 31 7	0 0 0
2/11/77 *	DDA		326 -27	330 -19	250 -33	FLT IN NOT	TOT: CLR: CLR:	29 23 6	29 23 6	17 14 3	0 0 0	0 0 0	12.9 0.0 62.5	1.6 0.0 7.5	.323E+05 .411E+02 .156E+06	53 62 12	0 0 0	0 0 0	29 23 6	0 0 0
2/12/77	DDA		345 -27	350 -20	235 -34	FLT IN NOT	TOT: CLR: CLR:	34 25 9	34 25 9	23 13 5	0 0 0	0 0 0	4.0 0.0 15.0	.6 0.0 3.0	.545E+04 .909E+01 .206E+05	43 48 26	0 0 0	0 0 0	34 25 9	0 0 0
2/19/77 *	DDA		324 -26	331 -19	218 -33	FLT IN NOT	TOT: CLR: CLR:	35 30 5	35 30 5	23 20 3	0 0 0	0 0 0	3.0 0.0 21.2	.8 0.0 5.8	.450E+04 .172E+02 .314E+05	68 75 17	0 0 0	0 0 0	0 0 0	0 0 0
2/20/77	DDA		325 -27	351 -19	213 -34	FLT IN NOT	TOT: CLR: CLR:	41 19 22	41 19 22	24 10 14	0 0 0	0 0 0	22.3 0.0 41.5	2.9 0.0 5.3	.202E+06 .511E+01 .377E+06	34 40 29	0 0 0	0 0 0	0 0 0	0 0 0
6/ 1/79	BDB		348 -27	351 -20	289 -34	FLT IN NOT	TOT: CLR: CLR:	41 41 0	41 41 0	25 25 0	21 21 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.318E+02 .318E+02 0.	70 70 0	23 23 0	40 40 0	41 41 0	0 0 0
6/ 2/79 *	BDB		364 -27	371 -19	288 -34	FLT IN NOT	TOT: CLR: CLR:	36 36 0	36 36 0	22 22 0	16 16 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.614E+03 .614E+03 0.	58 58 0	41 41 0	59 59 0	36 36 0	0 0 0
11/19/76	DDA		361 -27	390 -19	262 -33	FLT IN NOT	TOT: CLR: CLR:	45 45 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	44 44 0	1 1 0
11/26/76 *	DDA		302 -26	330 -19	255 -33	FLT IN NOT	TOT: CLR: CLR:	31 15 16	0 0 0	0 0 0	0 0 0	0 0 0	37.5 0.0 72.7	3.1 0.0 5.9	0. 0. 0.	0 0 0	0 0 0	0 0 0	31 15 16	0 0 0
11/27/76	DDA		341 -27	350 -19	269 -33	FLT IN NOT	TOT: CLR: CLR:	40 32 8	0 0 0	0 0 0	0 0 0	0 0 0	11.8 0.0 59.1	1.1 0.0 5.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	40 32 8	0 0 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS		NUMBER OF OBS					AVERAGES FOR		THE FLIGHT				TROP	STRAT	
							CLD	PD5	OZ	H20	H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N	
NAN-SYD (CONT.)																				
11/14/78	*	BBB	326 -27	330 -19	255 -33	FLT IN NOT	TOT: CLR: CLR:	34 31 3	34 31 3	21 19 2	16 13 3	3 1 2	2.1 0.0 23.9	.4 0.0 4.0	.856E+03 .165E+02 .953E+04	86 90 50	48 40 84	93 72 185	34 31 3	0 0 0
12/ 2/76	*	DDA	322 -26	330 -19	201 -33	FLT IN NOT	TOT: CLR: CLR:	33 25 8	0 0 0	0 0 0	0 0 0	0 0 0	3.2 0.0 13.3	1.1 0.0 4.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	33 25 8	0 0 0
12/ 3/76		DDA	309 -27	311 -19	267 -34	FLT IN NOT	TOT: CLR: CLR:	35 30 5	0 0 0	0 0 0	0 0 0	0 0 0	6.4 0.0 44.5	.8 0.0 5.4	0. 0. 0.	0 0 0	0 0 0	0 0 0	35 30 5	0 0 0
12/13/76	*	DDA	287 -26	290 -19	218 -33	FLT IN NOT	TOT: CLR: CLR:	36 35 1	0 0 0	0 0 0	0 0 0	0 0 0	.2 0.0 7.5	.0 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/14/76		DDA	344 -28	350 -19	208 -34	FLT IN NOT	TOT: CLR: CLR:	41 40 1	0 0 0	0 0 0	0 0 0	0 0 0	.0 0.0 2.0	.0 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/15/76	*	DDA	319 -27	330 -19	245 -33	FLT IN NOT	TOT: CLR: CLR:	32 26 6	0 0 0	0 0 0	0 0 0	0 0 0	8.2 0.0 43.5	.7 0.0 3.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/16/76		DDA	308 -27	310 -19	254 -34	FLT IN NOT	TOT: CLR: CLR:	41 32 9	0 0 0	0 0 0	0 0 0	0 0 0	8.7 0.0 39.5	.7 0.0 3.3	0. 0. 0.	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
12/23/76	*	DDA	324 -27	330 -19	251 -33	FLT IN NOT	TOT: CLR: CLR:	33 5 28	0 0 0	0 0 0	0 0 0	0 0 0	63.0 0.0 74.3	4.1 0.0 4.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	33 5 28	0 0 0
12/24/76		DDA	374 -27	390 -19	278 -33	FLT IN NOT	TOT: CLR: CLR:	39 22 17	0 0 0	0 0 0	0 0 0	0 0 0	19.0 0.0 43.6	2.1 0.0 4.8	0. 0. 0.	0 0 0	0 0 0	0 0 0	39 22 17	0 0 0
12/25/76	*	DDA	323 -27	330 -19	214 -33	FLT IN NOT	TOT: CLR: CLR:	34 16 18	0 0 0	0 0 0	0 0 0	0 0 0	23.9 0.0 45.1	2.5 0.0 4.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	34 16 16	0 0 0
12/26/76		DDA	370 -27	390 -19	271 -34	FLT IN NOT	TOT: CLR: CLR:	41 35 6	0 0 0	0 0 0	0 0 0	0 0 0	7.5 0.0 50.9	.2 0.0 1.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	41 35 6	0 0 0
12/15/77		BCB	346 -27	351 -19	264 -34	FLT IN NOT	TOT: CLR: CLR:	41 32 9	41 32 9	26 19 7	0 0 0	0 0 0	3.2 0.0 14.7	0.0 0.0 0.0	.177E+05 .408E+02 .807E+05	67 53 77	0 0 0	0 0 0	41 32 9	0 0 0
12/16/77	*	BCB	344 -27	365 -19	250 -33	FLT IN NOT	TOT: CLR: CLR:	33 27 6	33 27 6	21 18 3	0 0 0	0 0 0	2.4 0.0 12.9	0.0 0.0 0.0	.182E+04 .116E+03 .947E+04	71 72 62	0 0 0	0 0 0	33 27 6	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH		H2O		TROP	STRAT
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5									
NOU-SYD																						
8/25/76	*	DDA	321 -29	330 -23	220 -34	FLT IN NOT	TOT CLR CLR	21 18 3	0 0 0	13 11 2	0 0 0	0 0 0	.4 0.0 2.5	.5 0.0 3.3	0. 0. 0.	87 95 33	0 0 0	0 0 0	21 18 3	0 0 0	0 0 0	
8/25/76		DDA	324 -29	350 -23	252 -34	FLT IN NOT	TOT CLR CLR	26 23 3	0 0 0	16 14 2	0 0 0	0 0 0	2.1 0.0 17.8	.4 0.0 3.3	0. 0. 0.	67 71 42	0 0 0	0 0 0	26 23 3	0 0 0	0 0 0	
NRT-SFO																						
1/ 1/78	*	BCB	326 48	331 54	223 36	FLT IN NOT	TOT CLR CLR	104 75 29	22 68 14	70 51 19	57 39 18	10 1 9	11.1 0.0 39.7	.6 0.0 2.0	.167E+05 .242E+02 .980E+05	189 241 47	47 26 93	45 33 70	22 7 15	0 0 0	0 0 0	
2/20/79	*	BBB	348 49	351 55	281 36	FLT IN NOT	TOT CLR CLR	111 104 7	0 0 0	73 69 4	59 58 1	1 0 1	3.2 0.0 50.6	.2 0.0 3.0	0. 0. 0.	339 355 59	21 20 100	23 23 29	15 9 6	96 95 1	0 0 0	
3/13/79	*	BBB	342 49	351 55	288 36	FLT IN NOT	TOT CLR CLR	111 97 14	0 0 0	72 63 9	62 58 4	4 4 0	3.5 0.0 27.4	.2 0.0 1.6	0. 0. 0.	359 398 79	34 31 80	37 38 33	36 22 14	75 75 0	0 0 0	
10/13/78	*	BBB	347 47	371 55	209 36	FLT IN NOT	TOT CLR CLR	110 99 11	110 99 11	71 63 8	0 0 0	0 0 0	3.8 0.0 37.6	.3 0.0 3.0	.641E+04 .195E+02 .640E+05	181 197 52	0 0 0	0 0 0	42 32 10	68 67 1	0 0 0	
10/24/78	*	BBB	348 47	391 54	218 36	FLT IN NOT	TOT CLR CLR	112 104 8	112 104 8	71 66 5	59 58 1	1 0 1	1.6 0.0 22.4	.3 0.0 4.8	.712E+04 .236E+02 .994E+05	172 182 35	29 28 100	30 28 188	47 39 8	64 64 0	0 0 0	
11/ 5/78	*	BBB	331 50	350 58	252 36	FLT IN NOT	TOT CLR CLR	115 100 15	115 100 15	77 67 10	62 52 10	6 0 6	5.3 0.0 40.7	.4 0.0 3.4	.133E+05 .811E+02 .101E+06	153 171 29	41 31 91	83 47 268	38 24 14	77 76 1	0 0 0	
ORD-PIT																						
5/ 1/76		CAA	296 42	332 42	218 41	FLT IN NOT	TOT CLR CLR	6 3 3	0 0 0	3 2 1	5 3 2	3 1 2	4.1 0.0 8.2	.7 0.0 1.3	0. 0. 0.	101 93 116	93 89 100	216 271 135	6 3 3	0 0 0	0 0 0	
5/ 1/76	*	CAA	288 41	332 41	189 41	FLT IN NOT	TOT CLR CLR	8 4 4	0 0 0	5 4 1	5 3 2	3 2 1	8.9 0.0 17.8	1.0 0.0 2.0	0. 0. 0.	128 136 86	89 87 92	265 81 541	8 4 4	0 0 0	0 0 0	
5/ 3/76		CAA	301 42	331 42	223 41	FLT IN NOT	TOT CLR CLR	6 6 0	0 0 0	3 3 0	5 5 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	355 355 0	36 38 0	68 68 0	3 3 0	3 3 0	0 0 0	

DEP-ARR		CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ	RH	H2O	TROP N	STRAT N		
IM/ID/IY	CLD					PD5	OZ	H2O	H2S	%TIC	PATCHES	PC5								
ORD-PIT (CONT.)																				
5/ 3/76	*	CAA	323 41	391 41	200 41	FLT IN NOT	TOT: CLR: CLR:	8 8 0	0 0 0	4 4 0	6 6 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	479 479 0	30 30 0	66 66 0	3 3 0	5 5 0
5/ 4/76		CAA	294 41	330 42	219 41	FLT IN NOT	TOT: CLR: CLR:	7 7 0	0 0 0	4 4 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	52 52 0	0 0 0	0 0 0	7 7 0	0 0 0
5/ 4/76	*	CAA	293 41	311 41	223 41	FLT IN NOT	TOT: CLR: CLR:	8 5 3	0 0 0	5 4 1	0 0 0	0 0 0	11.8 0.0 31.4	.4 0.0 1.0	0. 0. 0.	77 76 78	0 0 0	0 0 0	8 5 3	0 0 0
ORD-SEA																				
2/13/79	*	CAB	393 46	412 47	205 43	FLT IN NOT	TOT: CLR: CLR:	26 24 2	26 24 2	17 16 1	15 14 1	3 3 0	5.7 0.0 73.7	.3 0.0 3.5	.652E+04 .253E+02 .845E+05	116 119 61	69 70 63	126 77 808	8 6 2	18 18 0
4/28/76		CAA	382 46	390 48	217 42	FLT IN NOT	TOT: CLR: CLR:	25 25 0	0 0 0	25 25 0	6 6 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	457 457 0	50 50 0	31 31 0	9 9 0	16 16 0	
4/29/76	*	CAA	380 45	410 47	201 43	FLT IN NOT	TOT: CLR: CLR:	21 21 0	0 0 0	21 21 0	3 3 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	498 498 0	38 38 0	67 67 0	5 5 0	16 16 0	
ORD-SFO																				
1/24/76	*	CAA	362 41	370 42	212 39	FLT IN NOT	TOT: CLR: CLR:	19 18 1	0 0 0	19 18 1	0 0 0	0.2 0.0 4.3	.2 0.0 3.0	0. 0. 0.	287 301 45	21 13 78	34 17 341	1 0 1	18 18 0	
1/28/76	*	CAA	356 42	411 43	213 38	FLT IN NOT	TOT: CLR: CLR:	27 21 6	0 0 0	27 21 6	15 9 6	5.0 0.0 22.5	.5 0.0 2.3	0. 0. 0.	78 93 10	74 65 100	31 33 25	22 16 6	5 5 0	
4/ 1/76		CAA	342 41	351 43	210 36	FLT IN NOT	TOT: CLR: CLR:	28 26 2	0 0 0	28 26 2	0 0 0	1.6 0.0 22.0	.2 0.0 3.0	0. 0. 0.	150 156 75	0 0 0	0 0 0	20 18 2	8 8 0	
4/14/76		CAA	380 41	390 42	217 38	FLT IN NOT	TOT: CLR: CLR:	25 19 6	0 0 0	25 19 6	11 6 5	15.7 0.0 65.4	.9 0.0 3.8	0. 0. 0.	335 399 133	61 50 95	78 93 30	12 6 6	13 13 0	
4/15/76	*	CAA	359 41	390 42	214 38	FLT IN NOT	TOT: CLR: CLR:	20 15 5	0 0 0	20 15 5	1 0 1	9.5 0.0 38.1	.6 0.0 2.2	0. 0. 0.	360 455 77	36 22 81	68 27 189	10 5 5	10 10 0	

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS						AVERAGES FOR THE FLIGHT			PD5			OZ	RH	H2O	TROP N	STRAT N
ORD-SFO (CONT.)																						
4/28/76	*	CAA	368 41	410 42	204 38	FLT IN NOT	TOT: CLR: CLR:	22 17 5	0 0 0	22 17 5	22 17 5	14 9 5	8.4 0.0 37.1	.4 0.0 1.6	0. 0. 0.	156 170 108	90 88 100	78 91 33	14 9 5	8 8 0		
6/25/78	*	CAB	368 39	371 41	313 38	FLT IN NOT	TOT: CLR: CLR:	38 38 0	38 38 0	24 24 0	22 22 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.743E+02 .743E+02 0.	106 106 0	14 14 0	17 17 0	38 38 0	0 0 0		
6/26/78		CAB	379 41	391 42	307 38	FLT IN NOT	TOT: CLR: CLR:	39 39 0	39 39 0	25 25 0	22 22 0	12 12 0	0.0 0.0 0.0	0.0 0.0 0.0	.396E+02 .396E+02 0.	216 216 0	85 85 0	119 119 0	27 27 0	12 12 0		
7/11/78	*	CAB	377 41	410 43	234 38	FLT IN NOT	TOT: CLR: CLR:	33 31 2	33 31 2	20 19 1	16 15 1	1 1 0	.2 0.0 2.9	.1 0.0 2.0	.183E+04 .252E+02 .299E+05	63 64 45	11 12 4	21 23 5	33 31 2	0 0 0		
7/12/78		CAB	375 41	391 43	293 38	FLT IN NOT	TOT: CLR: CLR:	37 32 5	37 32 5	24 22 2	20 18 2	1 0 1	5.0 0.0 37.3	.3 0.0 2.2	.149E+05 .165E+03 .109E+06	60 59 79	28 21 85	44 27 204	37 32 5	0 0 0		
ORD-YYZ																						
2/ 9/79	*	CAB	309 43	350 43	230 42	FLT IN NOT	TOT: CLR: CLR:	6 6 0	6 6 0	3 3 0	1 1 0	1 1 0	0.0 0.0 0.0	0.0 0.0 0.0	.356E+03 .356E+03 0.	219 219 0	100 100 0	327 327 0	2 2 0	4 4 0		
3/ 5/76		CAA	241 43	332 43	214 42	FLT IN NOT	TOT: CLR: CLR:	14 3 11	0 0 0	14 3 11	3 3 0	2 2 0	74.2 0.0 94.4	.4 0.0 .5	0. 0. 0.	41 67 34	84 84 0	232 232 0	14 3 11	0 0 0		
3/ 5/76	*	CAA	334 43	390 44	215 42	FLT IN NOT	TOT: CLR: CLR:	5 5 0	0 0 0	5 5 0	5 5 0	2 2 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	212 212 0	56 56 0	208 208 0	3 3 0	2 2 0		
PER-SYD																						
1/ 7/77	*	DDA	345 -33	351 -32	261 -34	FLT IN NOT	TOT: CLR: CLR:	39 33 6	0 0 0	0 0 0	0 0 0	0 0 0	7.0 0.0 45.8	.6 0.0 3.7	0. 0. 0.	0 0 0	0 0 0	0 0 0	39 33 6	0 0 0		
1/ 9/77		DDA	364 -34	370 -33	275 -35	FLT IN NOT	TOT: CLR: CLR:	37 36 1	0 0 0	0 0 0	0 0 0	0 0 0	.1 0.0 4.7	.0 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	37 36 1	0 0 0		
1/25/77		DDA	356 -34	371 -33	199 -35	FLT IN NOT	TOT: CLR: CLR:	36 36 0	36 36 0	18 18 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.720E+01 .720E+01 0.	129 129 0	0 0 0	0 0 0	36 36 0	0 0 0		

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH H2O		TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5							
PER-SYD (CONT.)																				
8/ 3/76	*	DDA	347 -33	351 -32	270 -34	FLT IN NOT	TOT: CLR: CLR:	43 41 2	0 0 0	28 26 2	0 0 0	0 0 0	.6 0.0 13.5	.3 0.0 5.5	0. 0. 0.	79 82 45	0 0 0	0 0 0	38 36 2	5 5 0
8/ 5/76		DDA	360 -34	370 -33	274 -35	FLT IN NOT	TOT: CLR: CLR:	30 30 0	0 0 0	20 20 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	162 162 0	0 0 0	0 0 0	8 8 0	22 22 0
8/ 6/76	*	DDA	354 -33	390 -32	260 -34	FLT IN NOT	TOT: CLR: CLR:	47 46 1	0 0 0	30 29 1	0 0 0	0 0 0	.4 0.0 18.8	.1 0.0 4.0	0. 0. 0.	120 122 70	0 0 0	0 0 0	32 31 1	15 15 0
8/ 8/76		DDA	352 -34	370 -33	268 -35	FLT IN NOT	TOT: CLR: CLR:	32 32 0	0 0 0	20 20 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	86 86 0	0 0 0	0 0 0	24 24 0	8 8 0
11/23/76		DDA	345 -34	370 -33	210 -35	FLT IN NOT	TOT: CLR: CLR:	37 36 1	0 0 0	0 0 0	0 0 0	0 0 0	.0 0.0 .8	.0 0.0 1.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	37 36 1	0 0 0
12/ 9/76	*	DDA	353 -33	370 -32	260 -34	FLT IN NOT	TOT: CLR: CLR:	48 48 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	48 48 0	0 0 0
12/11/76		DDA	347 -34	370 -33	241 -35	FLT IN NOT	TOT: CLR: CLR:	33 33 0	0 0 0	0 0 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 0 0	33 33 0	0 0 0
PPG-PPT																				
3/29/77	*	AAA	416 -16	431 -14	218 -17	FLT IN NOT	TOT: CLR: CLR:	25 16 9	25 16 9	0 0 0	21 13 8	16 8 8	16.4 0.0 45.5	1.0 0.0 2.9	.554E+05 .354E+02 .154E+C6	0 0 0	95 92 100	123 188 19	0 0 0	0 0 0
3/29/77		AAA	416 -16	431 -15	327 -17	FLT IN NOT	TOT: CLR: CLR:	25 12 13	25 12 13	0 0 0	22 10 12	21 9 12	24.8 0.0 47.7	1.3 0.0 2.5	.780E+05 .104E+04 .149E+06	0 0 0	98 95 100	35 38 32	0 0 0	0 0 0
5/ 3/77		AAA	393 -16	410 -15	265 -17	FLT IN NOT	TOT: CLR: CLR:	27 24 3	27 24 3	16 14 2	0 0 0	0 0 0	.4 0.0 3.9	.1 0.0 1.0	.165E+05 0. .148E+06	28 29 22	0 0 0	0 0 0	27 24 3	0 0 0
5/ 3/77	*	AAA	423 -16	430 -15	255 -17	FLT IN NOT	TOT: CLR: CLR:	28 23 5	28 23 5	18 15 3	0 0 0	0 0 0	1.6 0.0 8.8	.3 0.0 1.8	.384E+03 0. .215E+C4	35 35 36	0 0 0	0 0 0	28 23 5	0 0 0
5/10/77		AAA	400 -16	410 -15	244 -17	FLT IN NOT	TOT: CLR: CLR:	20 13 7	20 13 7	13 8 5	0 0 0	0 0 0	5.1 0.0 14.5	.9 0.0 2.4	.121E+05 .104E+02 .344E+05	29 30 28	0 0 0	0 0 0	20 13 7	0 0 0

APPENDIX B

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			OZ			RH			H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	ATIC	PATCHES	PD5									
PPG-PPT (CONT.)																						
5/10/77	*	AAA	421 -16	430 -15	299 -17	FLT IN NOT	TOT: CLR: CLR:	30 18 12	30 18 12	16 11 5	0 0 0	0 0 0	15.2 0.0 37.9	1.1 0.0 2.7	.444E+05 .129E+03 .111E+06	39 39 39	0 0 0	0 0 0	0 0 0	30 18 12	0 0 0	
5/17/77		AAA	410 -16	410 -15	410 -17	FLT IN NOT	TOT: CLR: CLR:	5 2 3	5 2 3	0 0 0	0 0 0	0 0 0	1.0 0.0 1.7	.8 0.0 1.3	.788E+02 0. .131E+03	0 0 0	0 0 0	0 0 0	0 0 0	5 2 3	0 0 0	
5/17/77	*	AAA	416 -16	430 -15	278 -17	FLT IN NOT	TOT: CLR: CLR:	11 10 1	11 10 1	7 7 0	0 0 0	0 0 0	.1 0.0 1.6	.1 0.0 1.0	.552E+03 .607E+03 0.	67 67 0	0 0 0	0 0 0	0 0 0	11 10 1	0 0 0	
5/14/79	*	BDB	385 -16	398 -15	264 -17	FLT IN NOT	TOT: CLR: CLR:	26 8 18	26 8 18	0 4 0	6 0 2	1 0 1	29.3 0.0 42.3	4.7 0.0 6.7	.170E+07 .512E+04 .245E+07	0 0 0	76 69 91	61 54 76	26 8 18	0 0 0		
5/26/79		BDB	321 -16	331 -15	195 -18	FLT IN NOT	TOT: CLR: CLR:	26 25 1	26 25 1	17 17 0	15 15 0	0 0 0	.3 0.0 9.0	.1 0.0 2.0	.627E+03 .403E+02 .153E+05	31 31 0	33 33 0	162 162 0	26 25 1	0 0 0		
10/23/78	*	BBB	382 -16	390 -15	287 -17	FLT IN NOT	TOT: CLR: CLR:	27 18 9	27 13 9	0 0 0	0 0 0	0 0 0	19.0 0.0 57.0	1.0 0.0 3.0	.393E+05 .140E+04 .115E+06	0 0 0	0 0 0	0 0 0	27 18 9	0 0 0		
11/ 4/78		BBB	321 -16	331 -15	214 -17	FLT IN NOT	TOT: CLR: CLR:	21 20 1	21 20 1	16 15 1	14 13 1	3 2 1	.6 0.0 11.3	.1 0.0 3.0	.394E+02 .350E+02 .126E+03	32 32 24	60 57 100	394 401 306	21 20 1	0 0 0		
12/14/76	*	AAA	419 -16	430 -15	238 -17	FLT IN NOT	TOT: CLR: CLR:	30 19 11	0 0 0	19 12 7	14 6 8	11 5 6	13.5 0.0 36.9	1.1 0.0 3.1	0. 0. 0.	22 23 20	96 98 95	199 435 21	30 19 11	0 0 0		
12/14/76		AAA	402 -16	410 -15	304 -17	FLT IN NOT	TOT: CLR: CLR:	25 16 9	0 0 0	16 10 6	0 0 0	0 0 0	11.7 0.0 32.5	1.1 0.0 3.0	0. 0. 0.	24 24 23	0 0 0	0 0 0	25 16 9	0 0 0		
12/21/76		AAA	400 -16	410 -15	297 -17	FLT IN NOT	TOT: CLR: CLR:	25 12 13	0 0 0	16 8 8	20 10 10	14 4 10	31.5 0.0 60.6	1.3 0.0 2.5	0. 0. 0.	59 68 50	94 89 100	63 96 31	25 12 13	0 0 0		
12/21/76	*	AAA	427 -16	430 -15	347 -17	FLT IN NOT	TOT: CLR: CLR:	27 11 16	0 0 0	17 6 9	0 0 0	0 0 0	20.0 0.0 33.7	1.2 0.0 2.1	0. 0. 0.	67 70 64	0 0 0	0 0 0	27 11 16	0 0 0		
12/28/76	*	AAA	424 -16	430 -15	330 -17	FLT IN NOT	TOT: CLR: CLR:	29 7 22	0 0 0	19 5 14	0 0 0	0 0 0	35.3 0.0 46.6	1.6 0.0 2.0	0. 0. 0.	37 43 35	0 0 0	0 0 0	29 7 22	0 0 0		
12/28/76		AAA	418 -16	430 -15	304 -17	FLT IN NOT	TOT: CLR: CLR:	25 1 24	0 0 0	17 1 16	0 0 0	0 0 0	48.8 0.0 50.8	1.3 0.0 1.3	0. 0. 0.	45 36 45	0 0 0	0 0 0	25 1 24	0 0 0		

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DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT			PD5		RH	H2O	TROP N	STRAT N
						CLD	PD5	OZ	H2O	H2S	%TIC	PATCHES	PD5	OZ					
PPG-PPT (CONT.)																			
12/12/77	*	BCB	380 -16	391 -15	272 -17	FLT IN NOT	TOT CLR CLR	29 29 0	29 29 0	17 17 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.557E+01 .557E+01 0.	31 31 0	0 0 0	0 0 0	29 29 0	0 0 0
12/17/77		BCB	317 -16	330 -15	212 -18	FLT IN NOT	TOT CLR CLR	24 24 0	24 24 0	15 15 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.138E+02 .138E+C2 0.	36 36 0	0 0 0	0 0 0	24 24 0	0 0 0
PPG-SYD																			
2/ 6/76		BBA	377 -27	390 -18	206 -34	FLT IN NOT	TOT CLR CLR	21 18 3	0 0 0	21 18 3	0 0 0	6.5 0.0 45.8	.2 0.0 1.3	0. 0. 0.	45 53 0	0 0 0	0 0 0	0 0 0	0 0 0
2/ 7/76	*	BBA	315 -23	330 -16	211 -34	FLT IN NOT	TOT CLR CLR	16 7 9	0 0 0	16 7 9	0 0 0	18.4 0.0 32.8	1.5 0.0 2.7	0. 0. 0.	11 24 0	0 0 0	0 0 0	0 0 0	0 0 0
SEA-SFO																			
2/13/79	*	BBB	369 43	390 46	285 39	FLT IN NOT	TOT CLR CLR	11 8 3	0 0 0	7 6 1	3 3 0	10.1 0.0 37.1	.8 0.0 3.0	0. 0. 0.	302 345 43	28 28 0	10 10 0	3 1 2	8 7 1
2/19/79		BBB	350 42	370 46	248 39	FLT IN NOT	TOT CLR CLR	12 11 1	0 0 0	8 8 0	4 4 0	.4 0.0 4.3	.3 0.0 3.0	0. 0. 0.	281 281 0	20 20 0	11 11 0	2 1 1	10 10 0
3/25/76	*	BBA	371 43	391 47	231 39	FLT IN NOT	TOT CLR CLR	9 9 0	0 0 0	9 9 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	307 307 0	0 0 0	0 0 0	2 2 0	7 7 0
3/27/76		BBA	371 41	372 44	371 39	FLT IN NOT	TOT CLR CLR	6 6 0	0 0 0	6 6 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	0. 0. 0.	643 643 0	0 0 0	0 0 0	0 0 0	6 6 0
4/23/76		BBA	312 43	332 46	213 40	FLT IN NOT	TOT CLR CLR	6 4 2	0 0 0	6 4 2	0 0 0	3.1 0.0 9.2	1.3 0.0 4.0	0. 0. 0.	111 118 99	0 0 0	0 0 0	6 4 2	0 0 0
4/29/76	*	BBA	372 44	390 47	274 40	FLT IN NOT	TOT CLR CLR	8 7 1	0 0 0	8 7 1	0 0 0	1.2 0.0 3.4	.4 0.0 3.0	0. 0. 0.	350 390 75	0 0 0	0 0 0	2 1 1	6 6 0
6/ 9/77		AAA	397 44	410 48	271 39	FLT IN NOT	TOT CLR CLR	17 15 2	17 15 2	10 9 1	0 0 0	4.7 0.0 40.2	.5 0.0 4.5	.376E+05 .379E+03 .317E+06	343 381 52	0 0 0	0 0 0	3 1 2	14 14 0

DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR THE FLIGHT		TROP			STRAT	
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N

## SEA-SFO (CONT.)

12/ 7/77	*	BCB	380 43	390 46	301 39	FLT IN NOT	TOT CLR CLR	11 11 0	11 11 0	8 8 0	0 0 0	0 0 0	0.0 0.0 0.0	0.0 0.0 0.0	.244E+02 .244E+02 0.	119 119 0	0 0 0	0 0 0	4 4 0	7 7 0
12/ 9/77	*	BCB	358 43	391 46	195 39	FLT IN NOT	TOT CLR CLR	11 9 2	11 9 2	8 7 1	0 0 0	0 0 0	5.6 0.0 30.8	0.0 0.0 0.0	.357E+05 .670E+03 .194E+06	77 78 64	0 0 0	0 0 0	4 3 1	7 6 1
12/ 9/77		BCB	348 43	370 46	226 39	FLT IN NOT	TOT CLR CLR	10 5 5	10 5 5	6 3 3	0 0 0	0 0 0	15.6 0.0 31.2	0.0 0.0 0.0	.628E+04 .404E+02 .125E+05	41 45 38	0 0 0	0 0 0	10 5 5	0 0 0
12/11/77		BCB	348 43	370 46	266 39	FLT IN NOT	TOT CLR CLR	12 7 5	12 7 5	7 5 2	0 0 0	0 0 0	19.9 0.0 47.7	0.0 0.0 0.0	.151E+06 0. .363E+06	69 79 44	0 0 0	0 0 0	7 4 3	5 3 2

## SFO-SYD

1/ 2/77	*	AAA	400 12	410 36	330 -32	FLT IN NOT	TOT CLR CLR	70 66 4	0 0 0	45 42 3	0 0 0	0 0 0	2.0 0.0 34.2	.2 0.0 3.3	0. 0. 0.	94 99 23	0 0 0	0 0 0	57 53 4	13 13 0
5/22/77	*	AAA	373 1	410 37	263 -32	FLT IN NOT	TOT CLR CLR	55 45 10	55 45 10	34 29 5	0 0 0	0 0 0	5.5 0.0 30.2	.4 0.0 2.2	.233E+05 .801E+03 .124E+06	64 69 40	0 0 0	0 0 0	54 44 10	1 1 0
7/ 3/77	*	ACA	392 1	430 37	202 -33	FLT IN NOT	TOT CLR CLR	149 119 30	0 0 0	0 0 0	0 0 0	0 0 0	8.1 0.0 40.1	0.0 0.0 0.0	0. 0. 0.	0 0 0	0 0 0	0 149 119 30	0 0 0	
10/ 2/77	*	ABA	376 2	410 37	238 -33	FLT IN NOT	TOT CLR CLR	121 91 30	0 0 0	80 52 18	0 0 0	0 0 0	5.0 0.0 20.1	.6 0.0 2.4	0. 0. 0.	68 80 26	0 0 0	0 0 0	103 73 30	18 18 0
12/19/76	*	AAA	374 3	431 37	251 -33	FLT IN NOT	TOT CLR CLR	142 113 29	0 0 0	89 70 19	0 0 0	0 0 0	4.7 0.0 23.1	.5 0.0 2.3	0. 0. 0.	77 86 42	0 0 0	0 0 0	126 97 29	16 16 0
12/26/76	*	AAA	377 -2	410 36	272 -34	FLT IN NOT	TOT CLR CLR	143 115 28	0 0 0	94 76 18	0 0 0	0 0 0	8.0 0.0 41.0	.3 0.0 1.7	0. 0. 0.	81 92 34	0 0 0	0 0 0	116 88 28	27 27 0

## SFO-YVR

10/ 5/77		BCB	292 40	310 42	196 38	FLT IN NOT	TOT CLR CLR	16 14 2	16 14 2	0 0 0	0 0 0	0 0 0	.9 0.0 7.1	0.0 0.0 0.0	.197E+04 .150E+04 .525E+04	0 0 0	0 0 0	0 0 0	16 14 2	0 0 0
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DEP-ARR	IM/ID/IY	CODE	AVFL ALAT	EXHI EXTN	EXLO EXTS	NUMBER OF OBS					AVERAGES FOR		THE FLIGHT	TROP			STRAT			
						CLD	PD5	OZ	H2O, H2S	%TIC	PATCHES	PD5	OZ	RH	H2O	N	N			
SIN-SYD																				
1/19/77	*	DDA	354 -17	390 0	260 -33	FLT	TOT:	76	76	50	0	0	14.5	1.1	.481E+05	46	0	0	76	0
						IN	CLR:	54	54	34	0	0	0.0	0.0	.820E+01	55	0	0	54	0
						NOT	CLR:	22	22	16	0	0	50.0	3.7	.166E+06	27	0	0	22	0
1/21/77		DDA	309 -17	331 0	199 -34	FLT	TOT:	72	72	47	0	0	13.4	.7	.391E+05	50	0	0	72	0
						IN	CLR:	54	54	36	0	0	0.0	0.0	.980E+01	57	0	0	54	0
						NOT	CLR:	18	18	11	0	0	53.8	2.7	.156E+06	30	0	0	18	0
1/30/77	*	DDA	340 -17	351 0	214 -33	FLT	TOT:	69	69	27	0	0	9.8	.7	.366E+05	42	0	0	69	0
						IN	CLR:	56	56	18	0	0	0.0	0.0	.908E+01	48	0	0	56	0
						NOT	CLR:	13	13	9	0	0	52.0	3.9	.194E+06	29	0	0	13	0
2/ 1/77		DDA	322 -17	351 0	237 -33	FLT	TOT:	73	73	24	0	0	2.4	.5	.618E+04	63	0	0	73	0
						IN	CLR:	65	65	24	0	0	0.0	0.0	.562E+02	63	0	0	65	0
						NOT	CLR:	8	8	0	0	0	21.7	4.5	.559E+05	0	0	0	8	0
2/13/77	*	DDA	341 -17	351 0	188 -33	FLT	TOT:	75	75	51	0	0	20.6	1.5	.719E+05	45	0	0	75	0
						IN	CLR:	44	44	30	0	0	0.0	0.0	.377E+02	59	0	0	44	0
						NOT	CLR:	31	31	21	0	0	49.7	3.7	.174E+06	25	0	0	31	0
2/15/77		DDA	346 -20	370 0	249 -34	FLT	TOT:	51	51	25	0	0	16.5	1.9	.423E+05	49	0	0	25	0
						IN	CLR:	31	31	17	0	0	0.0	0.0	.161E+03	56	0	0	10	0
						NOT	CLR:	20	20	8	0	0	42.1	4.8	.108E+06	34	0	0	15	0
11/21/76	*	DDA	348 -18	351 0	260 -34	FLT	TOT:	81	0	0	0	0	0.0	0.0	0.	0	0	0	81	0
						IN	CLR:	81	0	0	0	0	0.0	0.0	0.	0	0	0	81	0
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
11/28/76	*	DDA	329 -14	350 0	247 -33	FLT	TOT:	82	0	0	0	0	28.7	2.7	0.	0	0	0	82	0
						IN	CLR:	32	0	0	0	0	0.0	0.0	0.	0	0	0	32	0
						NOT	CLR:	50	0	0	0	0	47.1	4.4	0.	0	0	0	50	0
11/30/76		DDA	315 -18	330 0	211 -34	FLT	TOT:	72	0	0	0	0	5.7	.7	0.	0	0	0	72	0
						IN	CLR:	59	0	0	0	0	0.0	0.0	0.	0	0	0	59	0
						NOT	CLR:	13	0	0	0	0	31.7	3.7	0.	0	0	0	13	0
12/20/76	*	DDA	335 -17	351 0	197 -33	FLT	TOT:	80	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
						IN	CLR:	80	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
						NOT	CLR:	0	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
12/22/76		DDA	338 -17	370 0	248 -34	FLT	TOT:	71	0	0	0	0	5.5	.5	0.	0	0	0	0	0
						IN	CLR:	63	0	0	0	0	0.0	0.0	0.	0	0	0	0	0
						NOT	CLR:	8	0	0	0	0	48.8	4.3	0.	0	0	0	0	0
12/30/76		DDA	334 -17	350 0	257 -34	FLT	TOT:	76	0	0	0	0	10.9	1.0	0.	0	0	0	76	0
						IN	CLR:	51	0	0	0	0	0.0	0.0	0.	0	0	0	51	0
						NOT	CLR:	25	0	0	0	0	33.3	3.2	0.	0	0	0	25	0

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## APPENDIX C

### INDEPENDENCE OF CLOUD OBSERVATION PERIODS

The GASP cloud-encounter observation periods are normally repeated at 5-minute intervals, or about every 36 n.mi. at a ground speed of 500 knots. For two events to be statistically independent, the probability of occurrence of the second event cannot be conditionally dependent upon the occurrence of the first event. In fact, if two events are independent, the probability that both events occur is equal to the product of the probability that each event occurs. It is apparent from any satellite picture of the Earth that clouds are organized on scales from small to large. Adjacent cloud observation periods are, therefore, unlikely to be independent. The next two subsections discuss the degree of dependence between the cloud or no cloud ( $TIC > 0$ ,  $TIC = 0$ ) observations and, given a large cloud, the degree of dependence between values of TIC.

#### Independence of Cloud or No Cloud Observations

An example of dependence or persistence between adjacent cloud observation periods is shown in table CI. For the altitude band from 23.5 to 28.5 kft, 80 percent of the observation periods were clear, 20 percent had some clouds, and 14.5 percent had values of TIC greater than 10 percent. The next section of the table shows that the probability of a clear observation following a clear observation is 94.5 percent, while the probability of an observation with  $TIC > 0$  following another observation with  $TIC > 0$  is 81.7 percent. If all of the observation periods were statistically independent, these probabilities would be  $(0.8)^2$  (or 0.64) and  $(0.2)^2$  (or 0.04), respectively.

The dependence between observation periods should decrease as they become farther apart in time or space. In order to examine this relationship, all flights were separated into segments wholly contained within 500-ft altitude intervals. From these flight segments, the empirical probability that two cloud observation periods separated by  $N$  observation periods both contain some clouds ( $TIC > 0$ ) was computed as a function of  $N$ . The results for the 23.5 to 28.5 kft altitude interval are shown in figure C1. The curve approaches the value of 0.04, the value expected if the observations were independent, after a separation of about 20 observation periods. This result suggests that observation of the cloud or no cloud condition should be separated by 1 1/2 to 2 hours to be statistically independent.

Similar analyses performed for 500-ft height intervals at higher altitudes showed some tendency for increased separation between independent observations. However, because the probability of clouds ( $TIC > 0$ ) decreased with altitude and there were fewer long flight segments at these altitudes, no conclusive statement can be made. In any case, an observation separation of 90 to 120 minutes will likely yield nearly independent estimates of a cloud or no cloud condition at normal commercial flight levels.

#### Independence of TIC Values Within a Cloud

Another analysis was performed on series of sequential cloud observation periods for which  $TIC > 0$ . There were a total of 2068 series of two or more observation

## APPENDIX C

periods that fit this criterion. The breakdown of cloud-encounter series as a function of length (intervals of 5 observation periods) is presented in table CII. Over 85 percent of the cloud-encounter series consist of 10 intervals or less. This table also shows that the average value of TIC tends to increase as the length of cloud increases. Table CIII presents the percentage of observation periods which fall into each of four TIC classes. Relatively few observations fall into the high TIC classes compared with the low TIC classes.

The results of the analysis of the TIC values indicate that when TIC is less than 50 percent, the time between independent in-clouds observations is 10 to 20 minutes (2 to 4 observation periods). When TIC is greater than 50 percent, the sample-to-sample observations are highly correlated, and time between independent observation periods is too long to estimate reliably from the data available. It is safe to assume, however, that it is between the 20-minute value for low TIC and 90- to 120-minute value for the cloud or no cloud observations.

These results are consistent with intuition and meteorological observation. Large values of TIC tend to be associated with large (synoptic) scale storms where the clouds are uniform and extensive. Small values of TIC tend to be associated with individual convective storms or convective storm complexes. The resulting low values of TIC tend to vary appreciably from one observation period to another.

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TABLE CI.- PERSISTENCE OF CLOUD-ENCOUNTER DATA

[Altitude = 23.5 to 28.5 kft]

	Probability, percent, that present observation will be -		
	Clear	TIC > 0	TIC > 10
If previous observation was Random	80.0	20.0	14.5
If previous observation was Clear	94.5	5.5	2.1
TIC > 0	18.3	81.7	66.9
TIC > 10	9.6	90.4	79.2
If previous two observations were Clear	95.7	4.3	2.1
TIC > 0	16.5	83.5	73.2
TIC > 10	8.6	91.4	81.4

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TABLE CII.- DISTRIBUTION OF CLOUD EXTENT OBSERVATIONS AS MEASURED IN GASP

[ Total number of cloud encounters (series of 2 or more sequential observations with  $TIC > 0$ ) = 2068 ]

	Cloud length category (no. of sequential observation periods with $TIC > 0$ )						
	2-5	6-10	11-15	16-20	21-25	26-30	31-35
Number of cloud-encounter series .....	1264	541	172	61	18	10	2
Average TIC, percent .....	23.3	38.9	47.5	52.1	51.2	58.3	72.0

TABLE CIII.- DISTRIBUTION OF TIC FOR OBSERVATION PERIODS WITH  $TIC > 0$

TIC category, percent	Percentage of observation periods in category
1 to 20	37
21 to 50	24
51 to 80	20
81 to 100	19

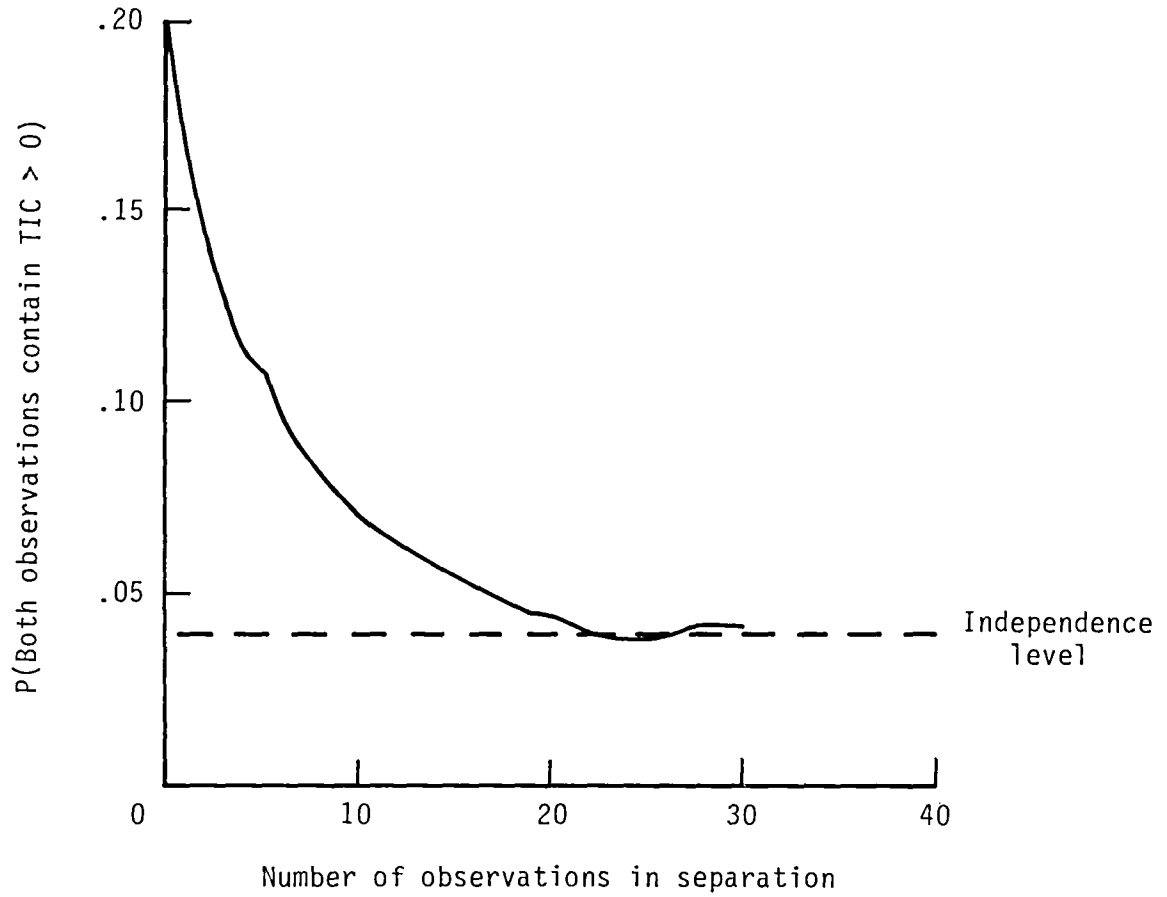


Figure C1.- The probability that two cloud-encounter observations both contain some clouds ( $\text{TIC} > 0$ ), as a function of observation separation.



## APPENDIX D

### CLOUD-ENCOUNTER STATISTICS AS FUNCTIONS OF LATITUDE, LONGITUDE, NORTHERN HEMISPHERE SEASON, AND ALTITUDE

This appendix is a tabulation of statistics for several quantities related to cloud encounter over the geographic area covered by the GASP flights. These statistics are presented with respect to altitude. The geographic grid (latitude and longitude) chosen had cells small enough to uncover significant geographic variability but large enough to obtain an adequate number of samples for statistical analyses. The grid chosen appears in figure D1. Subsequent pages of this appendix give statistical data within each grid cell in accordance with the code given at the top of each page in this appendix. The season and altitude range appear near the top of each page. Appendix E presents similar data described in terms of altitude separation from the tropopause.

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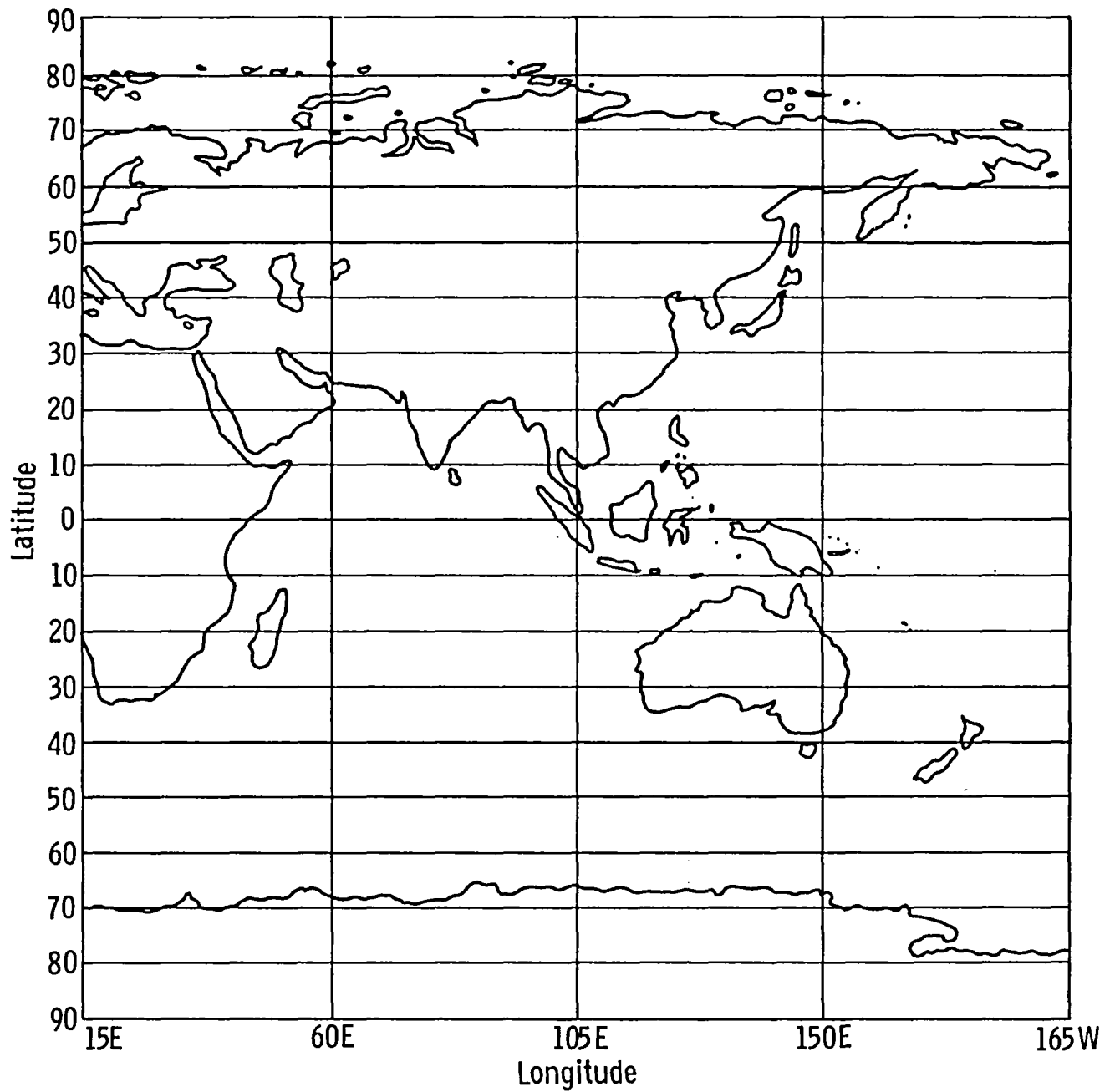


Figure D1.- Map of cell structure used in cloud-encounter and particle-concentration analysis.

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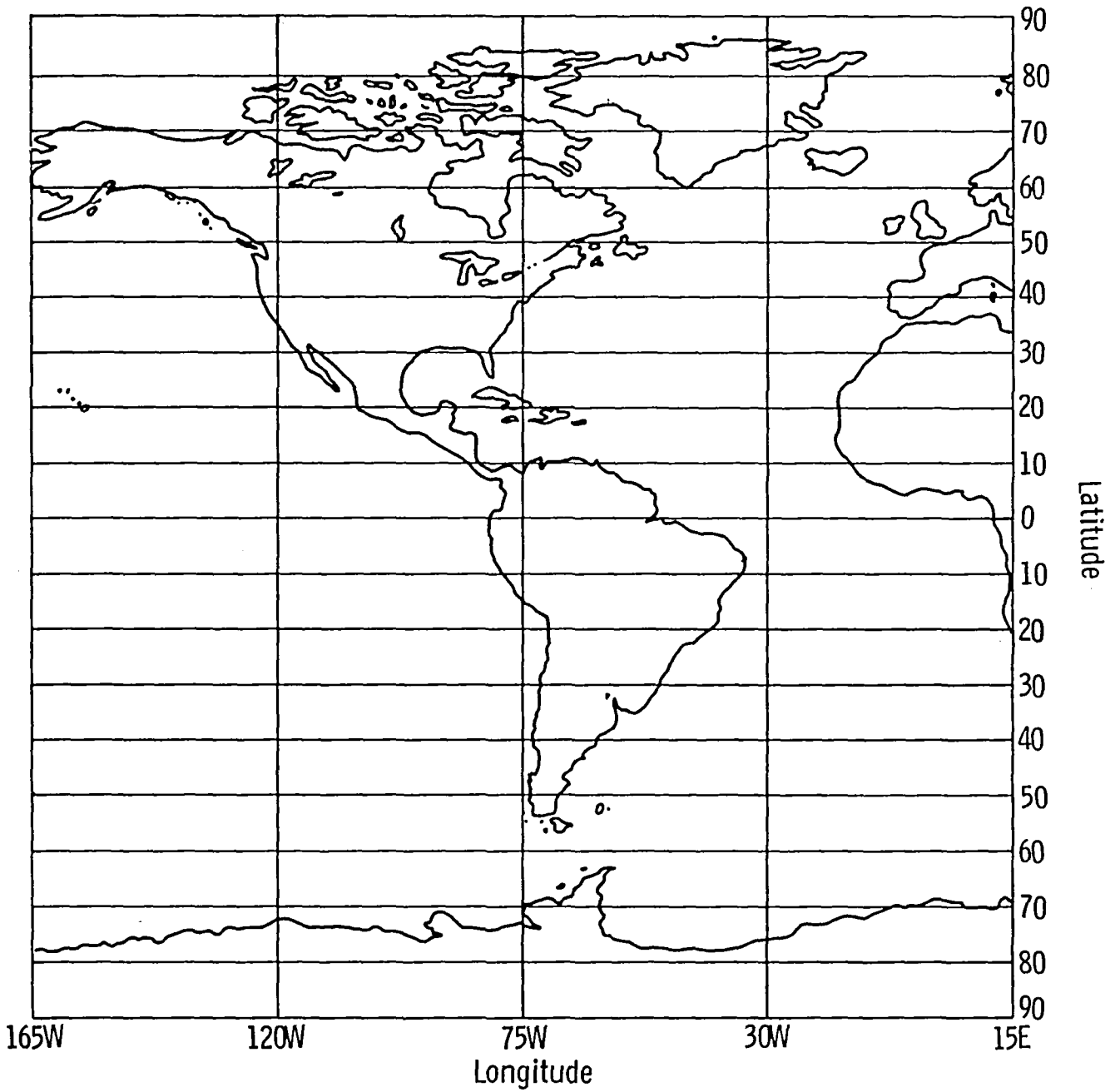


Figure D1.- Concluded.



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	$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
	$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
CODE:	$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} > 10 \%)$
	$\overline{T}_{\text{CLEAR}}$	$\overline{T}_{\text{CLOUD}}$	$P(\text{TIC} > 25 \%)$
	$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} > 50 \%)$

## Explanation of entries:

- $N_{\text{Flights}}$  - number of flights in latitude-longitude-altitude cell
- $N_{\text{Indep. obs.}}$  - number of observation periods considered independent in cell
- $N_{\text{Total obs.}}$  - total number of observation periods in cell
- $\overline{\text{TIC}} \%$  - average percentage of time in clouds, for all observation periods in cell
- $\text{SIGMA}_{\text{TIC}}$  - standard deviation of percentage of time in clouds, percent
- $\text{TICIV} \%$  - average percentage of time in clouds with clouds in vicinity
- $\text{SIGMA}_{\text{TICIV}}$  - standard deviation of percentage of time in clouds with clouds in vicinity
- $\overline{T}_{\text{CLEAR}}, \overline{T}_{\text{CLOUD}}$  - average temperature (Celsius) in clear or cloudy air
- $\overline{\Delta Z}_{\text{CLEAR}}, \overline{\Delta Z}_{\text{CLOUD}}$  - average distance above (negative values indicate below) the time-and-space-interpolated NMC tropopause, for observations made in the clear or cloudy air, kft
- $P(\text{TIC} > 0 \%)$  - probability, expressed in percent, that the time in clouds is greater than zero during an observation period in the cell (thus, the probability of cloud encounter; note that this is equal to PCE; see Vol. I)
- $\left. \begin{array}{l} P(\text{TIC} > 10 \%) \\ P(\text{TIC} > 25 \%) \\ P(\text{TIC} > 50 \%) \end{array} \right\}$  - probability that the time in clouds during an observation period in the cell will equal or exceed 10, 25, or 50 percent

# APPENDIX D

Code:

WINTER  
28.5-33.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					
40N					
30N					
20N					
10N					
0					
10S					
20S					
30S					
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
28.5-33.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 -2 0.0 0.0	3 4 37 .4 2.4 2.7 14.9 0.0 2.7 -60.0 -67.0 0.0 2.3 -.4 0.0	8 10 101 6.8 19.5 14.9 45.7 27.8 14.9 -54.1 -60.8 7.9 2.0 -.6 6.9	5 5 51 .3 2.4 2.0 17.6 0.0 2.0 -53.2 -56.0 0.0 .6 .6 0.0	17 20 190 3.8 14.6 8.9 42.2 27.8 8.9 -55.0 -60.9 4.2 1.6 -.5 3.7		
2 2 29 6.4 14.6 24.1 26.6 18.7 17.2 -53.3 -58.3 13.8 2.4 0.0 0.0	4 6 72 12.3 27.6 20.8 59.2 29.7 20.8 -52.9 -53.5 16.7 3.1 -5.1 13.9	14 18 203 11.0 25.8 23.2 47.3 34.1 20.2 -51.2 -56.2 14.3 .2 -1.5 10.3	45 55 427 10.1 24.9 21.8 46.6 34.1 16.4 -51.8 -54.5 14.3 -1.5 -5.3 9.8	66 83 763 10.0 24.7 21.4 46.8 33.7 17.2 -51.4 -55.0 13.9 -.4 -4.2 9.6		60N
11 12 77 24.0 33.6 50.6 47.4 33.5 39.0 -49.9 -51.5 33.8 -7.0 -5.9 24.7	43 47 170 8.2 21.7 21.2 38.5 32.4 15.3 -50.9 -51.5 11.2 -1.6 -5.3 8.2	44 59 549 12.2 27.4 23.7 51.6 33.7 20.6 -47.6 -50.2 16.4 -1.5 -7.1 12.4	33 45 420 17.1 31.2 33.8 50.5 34.5 26.9 -51.1 -53.9 22.6 -4.1 -6.0 17.6	169 206 1614 13.7 28.4 28.3 48.5 34.1 22.9 -50.0 -52.1 18.2 -2.9 -6.0 14.1		50N
81 92 431 10.4 23.3 27.8 37.3 30.8 20.2 -48.8 -50.0 14.8 -7.7 -7.8 10.0	50 54 165 13.6 26.5 32.1 42.3 31.0 26.1 -48.0 -46.0 19.4 -7.7 -9.6 14.5	3 4 31 28.1 35.5 48.4 58.2 29.4 45.2 -41.7 -42.1 38.7 -16.2 -12.0 29.0	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -41.4 0.0 0.0 -18.0 0.0 0.0	215 248 1424 10.2 23.8 23.9 42.4 31.7 18.9 -48.9 -48.3 14.2 -7.2 -8.3 10.3		40N
74 82 432 13.6 26.9 30.1 45.3 31.0 24.8 -41.5 -42.8 19.7 -15.9 -13.6 13.4	2 2 3 2.0 2.8 33.3 5.9 0.0 0.0 -38.0 -40.0 0.0 -23.4 -23.7 0.0		2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -40.9 0.0 0.0 -15.8 0.0 0.0	157 182 1307 7.8 21.3 17.8 43.9 31.3 14.5 -40.2 -43.7 11.4 -17.1 -13.5 7.3		30N
15 15 80 1.0 9.3 1.3 83.9 0.0 1.3 -33.6 -40.0 1.3 -26.9 -16.9 1.3				61 73 569 4.5 18.0 7.7 58.4 32.5 7.0 -35.2 -36.3 6.0 -25.1 -25.3 4.2		20N
5 5 10 0.0 0.0 0.0 0.0 0.0 0.0 -31.0 0.0 0.0 -26.7 0.0 0.0				37 41 286 8.6 20.2 24.5 35.2 27.1 18.2 -33.9 -35.8 14.0 -25.8 -25.4 7.7		10N
						0
						10S
5 5 23 1.5 7.1 4.3 34.9 0.0 4.3 -34.1 -29.0 4.3 -24.9 -29.5 0.0				60 62 379 6.1 17.1 20.8 29.4 26.8 14.2 -33.3 -33.8 9.5 -25.9 -24.6 4.0		20S
						30S
						40S

# APPENDIX D

Code:

SPRING  
28.5-33.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					1 2 21 0.0 0.0 0.0 0.0 0.0 0.0 -45.2 0.0 0.0 1.9 0.0 0.0
40N	6 8 64 4.6 12.2 21.9 21.1 18.1 14.1 -48.3 -45.6 7.8 -4.0 -5.7 1.6		2 2 7 25.5 21.0 85.7 29.8 19.7 71.4 -51.0 -49.3 42.9 -6.1 -6.7 14.3	4 5 44 21.2 33.8 45.5 46.7 36.3 29.5 -44.5 -44.7 29.5 -3.6 -7.7 22.7	
30N	10 14 142 3.1 13.1 13.4 23.0 28.7 5.6 -46.3 -49.2 4.2 -6.3 -4.0 2.8		47 47 105 8.9 21.7 26.7 33.3 30.9 17.1 -41.7 -44.3 14.3 -10.4 -9.9 6.7	4 5 42 2.1 7.6 14.3 14.4 15.0 7.1 -43.2 -41.3 2.4 -4.7 -6.6 0.0	
20N		12 13 71 6.9 17.8 19.7 35.2 24.8 14.1 -35.7 -40.0 14.1 -17.0 -13.3 7.0	15 18 90 .9 6.0 2.2 40.8 2.0 2.2 -36.0 -37.0 2.2 -21.5 -17.2 0.0	3 4 44 3.3 12.1 9.1 36.8 19.3 9.1 -43.6 -44.0 6.8 -15.5 -14.6 2.3	
10N		6 7 47 14.8 26.5 31.9 46.3 27.0 27.7 -32.8 -28.9 23.4 -18.6 -25.8 14.8	18 19 82 7.5 19.6 22.0 34.1 29.1 14.6 -32.8 -32.0 11.0 -21.3 -22.6 6.1	3 5 78 1.2 7.4 7.7 15.0 22.3 2.6 -40.0 -40.3 2.6 -17.2 -16.1 1.3	
0		2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -38.0 0.0 0.0 -19.5 0.0 0.0	1 1 3 .3 .4 33.3 .8 0.0 0.0 -40.5 -41.0 0.0 -15.6 -15.6 0.0		
10S					
20S					11 11 15 3.4 10.6 13.3 25.7 16.3 6.7 -34.8 -31.0 6.7 -24.2 -28.8 0.0
30S					3 3 18 0.0 0.0 0.0 0.0 0.0 0.0 -42.2 0.0 0.0 -20.5 0.0 0.0
40S					11 11 30 14.9 29.4 26.7 55.8 31.1 23.3 -48.3 -49.3 20.0 -9.6 -19.5 16.7



# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
28.5-33.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
			1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -56.0 0.0 0.0 -3.1 0.0 0.0		1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -56.0 0.0 0.0 -3.1 0.0 0.0	80N
	2 2 17 .0 .1 5.9 .4 0.0 0.0 -56.6 -60.0 0.0 -.4 .5 0.0		3 3 24 28.8 38.6 41.7 69.2 28.0 37.5 -56.7 -57.0 37.5 -2.6 -3.0 33.3		5 5 41 16.9 32.8 26.8 63.0 33.2 22.0 -56.7 -57.3 22.0 -1.5 -2.7 19.5	70N
3 3 23 11.0 28.6 13.0 84.1 11.4 13.0 -43.5 -53.0 13.0 1.8 -8.6 13.0	4 4 48 4.1 10.9 22.9 17.8 16.5 10.4 -50.9 -53.3 8.3 -1.6 -5.9 0.0	10 13 127 8.4 20.1 24.4 34.2 27.8 18.9 -49.9 -52.7 13.4 -2.6 -4.1 7.1	37 42 275 3.9 13.8 19.6 20.0 25.6 9.5 -49.3 -51.1 4.4 -2.9 -5.0 2.5	55 64 494 5.2 16.3 20.0 26.1 28.0 11.7 -49.1 -51.9 7.3 -2.2 -4.9 3.8		60N
13 16 137 4.7 14.6 20.4 23.0 24.9 11.7 -49.6 -53.4 8.0 -4.1 -4.3 3.6	103 107 357 13.3 25.7 33.1 40.2 30.2 27.2 -48.9 -49.3 19.3 -4.6 -6.7 11.8	45 53 366 13.3 25.4 36.1 36.9 30.3 27.6 -49.3 -50.7 18.6 -5.6 -7.1 11.5	10 12 83 7.7 18.0 30.1 25.7 24.8 21.7 -47.4 -50.4 12.0 -4.8 -8.8 6.0	183 203 1058 11.6 24.0 32.4 35.9 30.1 24.5 -48.8 -49.8 16.9 -4.7 -6.8 10.0		50N
70 72 331 2.6 9.3 18.1 14.2 17.6 7.9 -46.9 -47.3 3.0 -9.0 -9.0 1.2	64 65 159 9.8 22.1 27.0 36.2 29.3 22.0 -47.6 -47.5 14.5 -5.1 -7.2 8.8	4 4 4 3.4 5.9 25.0 13.7 0.0 25.0 -49.3 -46.0 0.0 -5.6 -5.7 0.0		199 207 783 5.0 15.6 20.1 24.7 27.0 11.6 -46.1 -46.8 7.0 -7.7 -8.0 3.7		40N
81 88 375 4.0 13.1 20.8 19.4 22.9 10.1 -44.0 -42.4 6.1 -12.9 -13.7 2.9	7 7 55 13.3 25.8 38.2 35.0 31.4 23.6 -46.3 -44.7 18.2 -13.3 -13.3 10.9			118 130 635 4.7 14.8 18.7 25.0 25.7 10.6 -41.8 -42.5 7.6 -15.1 -13.6 3.6		30N
4 4 4 0.0 0.0 0.0 0.0 0.0 0.0 -39.3 0.0 0.0 -17.4 0.0 0.0	4 4 10 .3 .8 10.0 2.7 0.0 0.0 -34.0 -36.0 0.0 -24.9 -18.7 0.0	2 2 8 19.7 31.3 50.0 39.4 34.4 37.5 -38.3 -39.3 25.0 -16.3 -15.8 12.5		37 41 229 6.8 19.2 19.2 35.4 29.9 13.1 -35.9 -32.8 10.5 -19.3 -22.1 5.7		20N
	1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -25.3 0.0 0.0 -27.9 0.0 0.0	5 5 18 2.4 8.7 16.7 14.4 16.8 5.6 -37.9 -34.0 5.6 -18.6 -19.1 0.0		9 9 31 1.4 6.7 12.9 11.0 15.7 3.2 -36.7 -35.8 3.2 -19.6 -18.2 0.0		10N
		1 1 10 11.1 26.0 30.0 37.0 36.0 30.0 -33.7 -34.3 10.0 0.0 0.0 10.0		1 1 10 11.1 26.0 30.0 37.0 36.0 30.0 -33.7 -34.3 10.0 0.0 0.0 10.0		0
5 6 24 .1 .4 4.2 2.0 0.0 0.0 -37.7 -37.0 0.0 -19.3 -25.1 0.0		1 1 12 12.5 22.6 33.3 37.6 24.1 25.0 -34.9 -34.3 25.0 0.0 0.0 16.7		17 18 51 4.0 13.3 13.7 29.1 23.6 7.8 -36.4 -33.7 7.8 -21.1 -27.0 3.9		10S
		4 4 4 1.8 3.1 25.0 7.1 0.0 0.0 -32.3 -34.0 0.0 -26.8 -26.1 0.0		7 7 22 .3 1.5 4.5 7.1 0.0 0.0 -40.8 -34.0 0.0 -21.4 -26.1 0.0		20S
				11 11 30 14.9 29.4 26.7 55.8 31.1 23.3 -48.3 -49.3 20.0 -9.6 -19.5 16.7		30S
						40S

# APPENDIX D

Code:

SUMMER  
28.5-33.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{TIC} \%$	$SIGMA_{TIC}$	$P(TIC > 0 \%)$
$TICIV \%$	$SIGMA_{TICIV}$	$P(TIC \geq 10 \%)$
$\overline{T}_{\text{CLEAR}}$	$\overline{T}_{\text{CLOUD}}$	$P(TIC \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(TIC \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	11 13 95 3.4 14.3 16.8 20.0 29.7 5.3 -43.4 -45.1 4.2 -9.9 -6.4 3.2				
40N	25 36 333 .6 4.8 4.2 14.9 18.1 1.8 -32.0 -41.3 .9 -23.3 -10.6 .6	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -23.0 0.0 0.0 -27.8 0.0 0.0	19 19 29 19.0 34.1 31.0 61.1 34.4 24.1 -33.5 -36.4 24.1 -23.1 -17.5 17.2	1 2 19 0.0 0.0 0.0 0.0 0.0 0.0 -36.6 0.0 0.0 -17.8 0.0 0.0	
30N	9 11 76 0.0 0.0 0.0 0.0 0.0 0.0 -29.7 0.0 0.0 -26.1 0.0 0.0	16 26 297 11.4 25.5 27.9 40.8 33.5 20.5 -30.2 -31.6 15.5 -24.0 -23.9 10.8	2 2 2 1.4 1.4 50.0 2.7 0.0 0.0 -37.0 -29.0 0.0 -23.6 -26.1 0.0		
20N		15 17 168 23.8 31.0 53.6 44.5 29.6 43.5 -31.2 -32.1 37.5 -25.7 -25.1 23.2	4 4 15 26.9 34.2 60.0 44.9 33.8 46.7 -35.3 -33.7 40.0 -23.0 -24.3 20.0		
10N		8 8 115 14.8 25.3 45.2 32.7 28.8 32.2 -33.7 -32.0 24.3 -24.7 -25.4 9.6	2 2 18 13.9 23.3 38.9 35.6 24.9 27.8 -38.3 -38.3 22.2 -22.6 -22.7 11.1		
0		8 9 56 5.1 12.2 23.2 22.0 16.5 19.6 -35.7 -34.2 7.1 -24.2 -24.6 1.8	9 10 129 4.1 12.9 15.5 26.3 22.2 10.9 -36.2 -35.5 7.8 -23.4 -23.6 2.3	1 1 10 3.4 6.0 40.0 8.5 6.7 20.0 -37.5 -37.8 0.0 -19.2 -20.1 0.0	
10S		3 3 34 6.0 15.9 20.6 29.0 23.7 20.6 -32.5 -37.0 5.9 -25.3 -23.5 5.9	11 12 129 0.0 0.0 0.0 0.0 0.0 0.0 -36.5 0.0 0.0 -23.0 0.0 0.0	4 4 19 .0 .1 5.3 .4 0.0 0.0 -34.2 -38.0 0.0 -16.9 -15.8 0.0	
20S		2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -32.4 0.0 0.0 -25.0 0.0 0.0	10 14 163 .5 4.4 3.1 17.8 18.4 1.2 -37.6 -39.0 1.2 -19.0 -20.3 0.0	2 2 21 .4 1.1 14.3 2.5 1.6 0.0 -38.3 -43.0 0.0 -17.5 -15.3 0.0	
30S			19 20 80 4.7 14.8 16.3 29.1 25.1 12.5 -48.0 -47.9 7.5 -6.2 -9.8 2.5	7 7 29 2.4 10.3 10.3 22.7 23.5 6.9 -48.2 -49.0 3.4 -6.1 -6.6 3.4	
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
28.5-33.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
	1 1 15 1.2 2.2 33.3 3.5 2.7 0.0 -55.8 -55.4 0.0 -.3 -1.3 0.0	1 1 2 .8 .8 50.0 1.6 0.0 0.0 -50.0 -51.0 0.0 -.9 -1.1 0.0	35 36 83 4.9 13.2 30.1 16.2 19.9 9.6 -46.7 -47.9 6.0 -4.1 -4.2 2.4	37 38 100 4.2 12.2 31.0 13.7 18.7 8.0 -48.1 -49.2 5.0 -3.5 -3.6 2.0		60N
8 8 17 .3 1.2 5.9 5.1 0.0 0.0 -43.3 -41.0 0.0 -6.9 -6.8 0.0	49 54 188 8.5 21.4 23.4 36.3 30.8 17.0 -40.0 -39.9 13.3 -13.9 -13.4 7.4	14 15 41 6.2 15.5 29.3 21.3 22.4 14.6 -44.4 -42.7 12.2 -6.5 -9.7 7.3	9 9 37 9.0 18.7 27.0 33.4 21.9 21.6 -45.9 -45.5 18.9 -6.2 -5.1 5.4	91 99 378 6.7 18.6 22.0 30.3 29.4 13.5 -42.1 -42.0 10.8 -11.0 -10.4 5.8		50N
59 62 177 1.3 8.8 4.5 29.9 29.3 3.4 -41.4 -40.1 1.7 -15.1 -14.2 1.1	37 37 68 6.0 21.2 16.2 37.2 40.3 8.8 -36.1 -40.5 5.9 -16.9 -15.1 5.9	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -34.0 0.0 0.0 -11.0 0.0 0.0		143 158 628 2.2 12.4 6.7 33.5 35.2 4.0 -35.3 -39.8 2.7 -20.1 -13.9 2.1		40N
56 59 234 .9 6.5 5.1 17.9 22.9 2.1 -39.9 -38.5 1.7 -16.8 -16.7 .4				83 98 609 5.9 19.0 15.8 37.6 33.2 10.8 -34.4 -32.4 8.2 -21.2 -23.0 5.4		30N
1 1 13 0.0 0.0 0.0 0.0 0.0 0.0 -39.8 0.0 0.0 -17.3 0.0 0.0				20 22 196 22.5 30.8 50.5 44.5 30.0 40.8 -32.6 -32.2 35.2 -24.4 -25.0 21.4		20N
				10 10 133 14.7 25.1 44.4 33.0 28.4 31.6 -34.4 -32.7 24.1 -24.4 -25.1 9.8		10N
				18 20 195 4.3 12.5 19.0 22.9 19.9 13.8 -36.1 -35.3 7.2 -23.4 -23.6 2.1		0
				18 19 182 1.1 7.3 4.4 25.4 24.1 3.8 -35.7 -37.1 1.1 -22.7 -22.5 1.1		10S
				14 18 189 .5 4.1 4.2 12.1 16.3 1.1 -37.5 -40.5 1.1 -19.0 -18.4 0.0		20S
				26 27 109 4.1 13.7 14.7 27.9 24.9 11.0 -48.0 -48.1 6.4 -6.2 -9.2 2.8		30S
						40S

# APPENDIX D

Code:

AUTUMN  
28.5-33.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					
40N					
30N					
20N					
10N					
0					
10S					
20S					
30S					
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
28.5-33.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
		1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 3.3 0.0 0.0			1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 3.3 0.0 0.0	80N
	4 5 52 14.6 27.5 34.6 42.2 32.0 26.9 -47.2 -53.3 21.2 3.8 -2.9 11.5	12 16 166 21.6 35.4 32.5 66.5 29.4 30.1 -50.2 -52.6 28.3 1.0 -3.9 23.5	10 11 125 9.3 23.4 20.0 46.4 32.0 16.8 -52.2 -51.2 13.6 -.2 -4.9 8.8	26 32 343 16.1 30.9 28.3 56.8 32.5 24.8 -50.6 -52.4 21.9 .9 -4.0 16.3		70N
4 6 71 5.3 13.4 16.9 31.2 16.1 15.5 -48.5 -45.8 11.3 1.1 -2.9 1.4	6 7 86 13.5 27.2 27.9 48.4 31.1 20.9 -51.4 -53.1 20.9 -1.0 -3.0 14.0	25 36 408 3.2 13.8 8.1 40.0 29.5 6.6 -48.0 -47.8 4.9 -.5 -5.0 3.2	84 100 793 10.6 23.6 30.0 35.4 31.3 21.1 -46.6 -47.7 15.1 -5.0 -7.3 9.7	121 152 1396 8.1 21.0 22.0 36.7 30.9 16.0 -47.6 -48.0 11.9 -2.7 -6.6 7.4		60N
13 17 153 6.7 18.7 19.6 34.3 29.0 13.1 -42.1 -45.0 10.5 -10.5 -8.8 5.2	29 33 151 11.6 25.0 29.1 39.7 32.0 21.9 -49.1 -47.2 17.2 -5.4 -7.5 10.6	76 93 794 12.1 27.7 22.4 53.9 34.2 19.3 -45.6 -47.4 16.1 -6.2 -7.7 12.0	26 32 253 9.4 23.5 22.1 42.6 32.9 17.4 -49.8 -52.3 12.6 -5.8 -6.2 9.1	164 199 1558 10.8 25.4 23.4 46.2 33.7 18.8 -46.6 -48.1 15.0 -6.7 -7.6 10.2		50N
27 29 120 4.1 13.2 20.0 20.5 23.1 12.5 -42.9 -45.5 5.8 -11.9 -11.9 3.3	30 32 106 8.2 22.9 16.0 51.4 32.6 13.2 -43.9 -42.6 11.3 -10.0 -11.0 8.5	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -25.0 0.0 0.0 -11.2 0.0 0.0		122 132 587 4.9 17.8 12.1 40.8 33.9 9.0 -44.5 -43.0 6.8 -10.6 -13.5 4.8		40N
15 16 65 7.7 21.9 15.4 50.2 31.5 13.8 -41.7 -41.4 9.2 -17.9 -17.0 7.7	1 2 19 0.0 0.0 0.0 0.0 0.0 0.0 -37.2 0.0 0.0 -20.5 0.0 0.0			38 43 293 5.8 18.1 15.0 38.8 30.0 11.9 -39.2 -41.5 8.5 -20.0 -16.1 5.1		30N
5 5 31 11.2 24.4 29.0 38.4 31.6 22.6 -35.3 -34.9 16.1 -20.4 -23.5 9.7	3 3 14 0.0 0.0 0.0 0.0 0.0 0.0 -34.9 0.0 0.0 -22.0 0.0 0.0			24 30 255 5.8 18.4 15.3 38.0 31.5 11.4 -32.8 -34.1 7.8 -23.4 -22.6 5.5		20N
2 2 14 7.1 21.6 14.3 50.0 33.5 14.3 -36.5 -35.0 7.1 -24.3 -24.8 7.1	2 2 3 0.0 0.0 0.0 0.0 0.0 0.0 -34.7 0.0 0.0 -23.6 0.0 0.0	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -29.0 0.0 0.0 -25.1 0.0 0.0		15 15 90 9.9 21.6 28.9 34.4 27.9 18.9 -32.6 -32.2 15.6 -23.1 -20.9 8.9		10N
				5 5 55 11.2 20.3 43.6 25.6 24.0 30.9 -33.9 -31.0 16.4 -21.9 -21.2 7.3		0
3 3 19 .6 2.6 5.3 11.8 0.0 5.3 -39.2 -41.0 0.0 -21.4 -20.9 0.0		1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -39.0 0.0 0.0 -25.6 0.0 0.0		15 16 80 2.8 12.5 7.5 37.9 27.7 6.3 -36.7 -32.0 5.0 -21.3 -22.2 2.5		10S
		1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -38.0 0.0 0.0 -25.7 0.0 0.0		8 12 101 13.3 26.3 24.8 53.5 25.3 21.8 -41.1 -36.5 21.8 -18.6 -21.1 13.9		20S
				23 25 120 5.8 20.0 9.2 62.9 27.8 8.3 -48.6 -47.9 7.5 -7.5 -10.1 6.7		30S
						40S

# APPENDIX D

Code:

WINTER  
33.5-38.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					
40N					
30N					
20N					
10N					
0					
10S					
20S					
30S					
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
33.5-38.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
		2 2 14 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 4.9 0.0 0.0			2 2 14 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 4.9 0.0 0.0	80N
7 9 85 0.0 0.0 0.0 0.0 0.0 0.0 -54.3 0.0 0.0 3.7 0.0 0.0	7 10 110 .4 4.1 .9 43.1 0.0 .9 -58.1 -65.0 .9 3.8 -.1 0.0	4 4 39 0.0 0.0 0.0 0.0 0.0 0.0 -57.2 0.0 0.0 3.2 0.0 0.0	1 1 16 0.0 0.0 0.0 0.0 0.0 0.0 -56.1 0.0 0.0 2.1 0.0 0.0	20 25 258 .2 2.7 .4 43.1 0.0 .4 -56.3 -65.0 .4 3.6 -.1 0.0		70N
9 12 131 0.0 0.0 0.0 0.0 0.0 0.0 -50.2 0.0 0.0 3.6 0.0 0.0	8 14 176 .0 .1 .6 .8 0.0 0.0 -55.5 -63.0 0.0 2.9 -1.1 0.0	21 31 344 12.1 28.8 18.0 67.0 30.3 16.6 -51.8 -62.1 15.4 4.4 -3.9 12.8	31 37 381 10.8 25.6 23.1 46.7 34.0 17.8 -56.4 -61.9 15.2 2.0 -3.3 10.0	78 108 1211 6.8 21.7 12.5 54.8 34.2 10.3 -53.2 -62.0 9.2 3.4 -3.5 6.8		60N
22 26 198 3.1 12.7 10.6 29.4 27.2 7.1 -52.5 -61.4 6.1 1.4 -.7 1.5	60 71 608 5.0 17.6 14.8 34.0 33.1 9.0 -54.2 -60.1 7.1 1.3 -2.5 4.8	34 51 525 19.6 33.7 31.6 62.1 30.9 28.4 -53.4 -58.0 26.1 1.4 -6.4 21.7	26 28 209 10.0 25.8 17.2 58.0 32.8 14.4 -54.3 -60.7 12.9 1.1 -2.5 10.5	168 211 1870 9.1 24.4 18.2 50.2 34.5 14.3 -53.3 -59.3 12.4 1.6 -4.2 9.5		50N
104 135 1407 8.8 22.0 23.4 37.5 31.3 17.3 -53.1 -55.9 12.4 -4.5 -6.5 8.0	54 65 603 10.1 23.6 24.4 41.6 31.4 19.4 -54.6 -59.1 15.1 -2.6 -5.0 9.1			235 291 2940 7.8 21.1 19.7 39.7 31.6 15.0 -52.7 -56.8 11.2 -3.7 -5.8 7.1		40N
86 126 1526 10.2 22.9 27.1 37.6 29.9 20.8 -49.0 -51.8 14.7 -11.4 -11.0 9.3	2 2 3 19.0 26.8 33.3 56.9 0.0 33.3 -53.0 -52.0 33.3 -17.0 -20.3 33.3			142 199 2289 7.8 20.3 20.7 37.6 29.5 16.1 -48.2 -52.1 11.3 -11.9 -10.7 6.9		30N
27 29 304 5.7 17.3 13.8 41.5 26.1 11.8 -47.4 -49.6 9.9 -20.5 -19.7 4.6				73 84 803 2.9 12.3 9.1 32.0 26.9 6.2 -46.3 -49.4 5.0 -19.6 -18.6 2.2		20N
22 25 150 11.1 22.7 32.0 34.7 28.1 22.0 -48.5 -48.4 18.7 -20.2 -20.3 9.3				59 63 518 14.4 26.8 34.6 41.6 30.8 26.1 -45.6 -45.5 21.6 -21.3 -21.3 13.9		10N
9 9 93 4.0 13.6 14.0 28.4 25.1 8.6 -48.5 -48.4 6.5 -21.2 -21.2 3.2				47 51 527 12.6 25.0 33.6 37.5 30.6 24.7 -44.6 -43.3 18.2 -21.9 -22.3 11.6		0
6 6 13 15.4 21.3 46.2 33.3 19.6 38.5 -45.6 -46.3 30.8 -22.0 -21.4 7.7				59 67 523 11.6 25.7 25.4 45.7 32.3 20.1 -43.5 -44.5 16.4 -22.1 -21.9 11.7		10S
				42 62 648 4.9 17.6 12.2 40.2 33.6 8.5 -43.3 -47.2 6.6 -21.2 -19.6 4.8		20S
				64 78 696 3.5 15.3 8.5 41.7 34.0 6.3 -48.6 -49.8 4.6 -12.3 -9.4 3.6		30S
						40S

# APPENDIX D

Code:

SPRING  
33.5-38.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				1 1 7 0.0 0.0 0.0 0.0 0.0 0.0 -47.1 0.0 0.0 6.0 0.0 0.0	
60N				19 31 375 5.0 17.4 10.7 46.8 29.5 9.1 -52.4 -62.6 7.7 2.9 -.3 5.1	
50N	9 11 84 3.7 14.2 10.7 34.2 29.1 7.1 -54.9 -56.8 4.8 .0 1.1 4.8		8 8 48 7.0 19.3 22.9 30.4 30.1 16.7 -51.4 -56.7 8.3 1.3 -5.3 4.2	33 48 585 6.7 21.0 15.4 43.8 35.2 11.1 -53.8 -56.1 8.7 -.5 -4.5 7.0	
40N	11 15 174 5.5 16.7 16.7 32.7 28.1 11.5 -54.2 -56.3 8.6 -2.6 -4.2 3.4	3 3 3 28.9 40.9 33.3 86.7 0.0 33.3 -50.0 -51.0 33.3 -8.8 -7.5 33.3	46 47 321 11.1 24.1 29.9 37.0 31.3 21.5 -52.5 -53.5 16.2 -5.6 -7.7 9.7	24 25 191 8.2 21.8 20.4 40.1 32.4 14.7 -52.6 -52.3 12.0 -1.0 -6.3 8.9	
30N	3 3 8 0.0 0.0 0.0 0.0 0.0 0.0 -49.9 0.0 0.0 -17.4 0.0 0.0	14 17 174 5.4 18.7 13.2 40.5 34.8 8.6 -48.3 -50.2 7.5 -10.5 -9.7 5.2	13 15 129 5.7 16.2 20.9 27.2 25.8 14.0 -46.3 -46.5 7.8 -12.5 -14.1 4.7	9 12 177 5.3 13.6 31.6 16.9 19.8 14.1 -50.1 -49.4 9.0 -12.3 -12.6 2.8	
20N		9 11 71 9.5 19.9 31.0 30.6 25.0 22.5 -46.6 -46.0 15.5 -14.4 -16.3 8.5	16 17 113 2.7 10.4 16.8 16.3 20.5 5.3 -45.8 -45.2 4.4 -16.3 -17.5 2.7	9 14 180 4.6 16.4 11.7 39.3 30.8 9.4 -47.1 -48.6 7.2 -15.4 -14.7 3.9	
10N		2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -48.4 0.0 0.0 -11.8 0.0 0.0	1 1 6 2.4 4.2 33.3 7.1 4.3 16.7 -45.0 -45.5 0.0 -13.6 -13.7 0.0	5 5 11 5.2 12.0 18.2 28.4 11.6 18.2 -50.7 -43.0 9.1 -19.7 -17.2 0.0	
0				6 6 63 9.3 20.9 28.6 32.6 27.7 23.8 -47.6 -49.6 12.7 -17.8 -20.0 6.3	
10S				10 10 66 2.7 10.3 10.6 25.0 20.8 6.1 -50.3 -49.1 4.5 -19.1 -20.6 1.5	
20S				3 3 36 .1 .3 2.8 2.0 0.0 0.0 -52.1 -50.0 0.0 -13.8 -23.4 0.0	
30S				5 5 16 .4 1.5 6.3 6.3 0.0 0.0 -54.9 -57.0 0.0 -10.5 -9.0 0.0	
40S					



# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
33.5-38.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -58.8 0.0 0.0 2.4 0.0 0.0	2 2 14 .1 .4 7.1 1.6 0.0 0.0 -52.9 -59.0 0.0 1.9 -.7 0.0	1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 .1 0.0 0.0	4 4 25 1 .3 4.0 1.6 0.0 0.0 -55.6 -59.0 0.0 1.8 -.7 0.0	80N	
10 11 151 .0 .0 .7 .4 0.0 0.0 -49.2 -47.0 0.0 4.9 5.4 0.0	13 13 122 .0 .1 3.3 .4 0.0 0.0 -50.3 -49.0 0.0 4.3 5.9 0.0	6 6 88 .0 .2 4.5 .7 .5 0.0 -51.7 -57.8 0.0 3.8 2.8 0.0	4 4 40 0.0 0.0 0.0 0.0 0.0 0.0 -50.9 0.0 0.0 3.8 0.0 0.0	34 35 408 .0 .1 2.2 .5 .4 0.0 -50.2 -52.7 0.0 4.4 4.4 0.0	70N	
24 32 337 1.2 7.9 4.2 27.8 27.4 2.1 -50.4 -63.1 1.8 3.4 -2.2 .9	17 29 343 1.8 9.4 9.0 20.1 24.6 4.1 -55.4 -59.7 2.9 .7 -3.2 1.2	29 32 327 11.4 26.2 27.5 41.4 35.5 18.7 -52.8 -57.1 14.7 1.1 -3.6 11.3	35 47 503 4.8 16.4 14.5 32.9 30.6 9.9 -53.7 -60.6 6.6 1.5 -1.6 4.2	124 171 1885 4.8 17.0 13.2 36.4 32.5 8.8 -53.0 -59.7 6.7 1.9 -2.4 4.5	60N	
36 50 531 6.1 18.1 19.8 30.7 30.1 12.4 -54.5 -58.8 8.5 -.4 -5.5 5.1	115 136 1026 7.1 20.2 17.3 41.1 31.0 13.5 -54.4 -58.1 10.8 -.3 -3.4 6.4	39 50 439 8.6 21.9 23.5 36.7 31.9 16.9 -54.2 -56.5 13.0 -1.2 -3.2 7.7	13 17 138 3.1 13.3 11.6 26.6 30.0 6.5 -52.5 -59.4 4.3 .2 -2.9 2.2	253 320 2851 6.8 19.9 18.0 37.7 32.1 12.9 -54.1 -57.6 9.8 -.4 -3.9 6.2	50N	
130 162 1606 2.6 11.5 11.6 22.5 26.2 6.1 -54.8 -57.5 3.8 -4.3 -4.8 2.1	110 125 873 5.1 17.5 12.7 40.1 31.8 9.5 -53.7 -59.7 7.4 -.7 -3.1 4.8	4 4 47 .0 .1 2.1 .4 0.0 0.0 -55.1 -38.0 0.0 -3.7 2.0 0.0		328 381 3215 4.6 16.1 14.4 31.9 30.5 9.3 -54.1 -56.6 6.7 -3.2 -5.1 4.0	40N	
95 137 1489 5.9 18.1 17.3 34.2 30.3 12.2 -52.2 -54.4 8.9 -8.4 -7.9 5.0	9 10 90 3.4 12.1 15.6 21.8 23.1 7.8 -48.1 -50.6 5.6 -13.6 -14.9 2.2	4 4 54 2.1 9.6 5.6 38.4 16.4 5.6 -53.8 -49.3 3.7 -14.5 -13.5 1.9		147 198 2121 5.6 17.3 18.0 31.2 29.5 11.8 -51.2 -52.7 8.4 -9.5 -9.5 4.6	30N	
13 16 143 2.4 8.2 11.9 20.0 14.4 7.0 -48.5 -46.6 4.2 -15.5 -15.5 0.0	11 12 107 11.1 23.4 34.6 32.0 30.2 21.5 -48.5 -48.8 15.9 -14.8 -14.6 10.3	8 8 72 10.4 25.1 29.2 35.8 35.4 16.7 -50.4 -49.9 13.9 -18.6 -16.1 11.1		66 78 686 6.0 17.5 20.0 29.8 28.7 12.2 -47.6 -47.7 9.0 -15.7 -15.6 5.1	20N	
11 13 142 6.4 19.0 15.5 41.6 29.7 12.7 -48.2 -45.5 9.2 -19.3 -17.4 7.0		7 7 76 18.7 30.3 39.5 47.4 31.2 34.2 -48.3 -49.1 28.9 -17.7 -16.5 17.1		26 28 240 10.0 23.4 23.3 43.0 30.6 19.6 -48.3 -47.3 15.0 -18.6 -16.8 9.6	10N	
3 3 37 0.0 0.0 0.0 0.0 0.0 0.0 -47.3 0.0 0.0 -20.1 0.0 0.0		7 7 72 17.7 26.1 55.6 31.9 27.9 41.7 -49.0 -48.9 25.0 -19.3 -19.2 15.3		16 16 172 10.8 22.2 33.7 32.1 27.8 26.2 -47.9 -49.1 15.1 -18.9 -19.6 8.7	0	
2 2 10 4.5 11.2 20.0 22.7 14.5 10.0 -43.6 -46.5 10.0 -20.7 -14.0 0.0		8 8 84 12.0 23.1 41.7 28.8 28.2 26.2 -49.5 -48.7 16.7 -20.1 -19.9 8.3		20 20 160 7.7 18.8 27.5 27.9 26.7 16.9 -49.5 -48.6 11.3 -19.5 -19.7 5.0	10S	
		6 6 12 11.8 21.9 25.0 47.3 15.2 25.0 -50.0 -49.3 25.0 -20.2 -19.7 8.3		9 9 48 3.0 12.1 8.3 36.0 23.7 6.3 -51.6 -49.5 6.3 -14.7 -20.6 2.1	20S	
				5 5 16 .4 1.5 6.3 6.3 0.0 0.0 -54.9 -57.0 0.0 -10.5 -9.0 0.0	30S	
					40S	

# APPENDIX D

Code:	$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
	$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
	$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
	$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
SUMMER 33.5-38.5 KFT	$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				2 2 16 1.8 7.0 6.3 29.0 0.0 6.3 -53.7 -58.0 6.3 -.7 -4.4 0.0	
60N				7 10 107 1.3 5.0 10.3 12.3 10.5 4.7 -47.1 -57.0 .9 2.2 -.7 0.0	
50N	7 8 88 .3 2.0 2.3 12.9 3.5 1.1 -49.0 -54.0 0.0 -2.8 .5 0.0		6 6 26 .3 1.0 7.7 3.7 .2 0.0 -46.5 -44.0 0.0 -10.3 -16.4 0.0	17 28 350 12.7 24.0 38.3 33.3 28.7 26.6 -50.3 -51.8 18.6 -5.7 -8.6 12.0	
40N	13 20 232 0.0 0.0 0.0 0.0 0.0 0.0 -40.3 0.0 0.0 -20.4 0.0 0.0		27 27 132 16.9 27.4 42.4 39.8 29.3 31.8 -48.9 -47.3 25.0 -13.0 -14.2 15.2	11 11 53 6.7 15.1 22.6 29.4 18.5 18.9 -49.0 -51.8 11.3 -13.2 -11.9 3.8	
30N	4 6 56 0.0 0.0 0.0 0.0 0.0 0.0 -39.4 0.0 0.0 -22.9 0.0 0.0	5 7 67 4.1 16.5 6.0 69.0 9.5 6.0 -38.8 -39.5 6.0 -18.5 -15.6 6.0	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -41.5 0.0 0.0 -21.4 0.0 0.0	1 2 35 0.0 0.0 0.0 0.0 0.0 0.0 -48.7 0.0 0.0 -14.3 0.0 0.0	
20N		9 11 108 29.8 31.5 71.3 41.9 29.8 58.3 -42.2 -44.2 46.3 -20.7 -19.5 29.6	3 3 25 21.2 28.3 56.0 37.8 28.3 44.0 -40.1 -41.5 32.0 -22.2 -21.3 20.0		
10N		6 6 74 9.5 22.2 29.7 32.0 30.7 17.6 -43.6 -42.9 12.2 -20.8 -20.7 8.1	3 3 21 6.2 13.4 23.8 26.0 15.5 19.0 -43.6 -43.2 14.3 -20.7 -20.7 0.0	2 2 32 1.7 6.0 21.9 7.7 10.8 6.3 -45.2 -48.1 3.1 -18.7 -18.4 0.0	
0		4 4 29 6.0 20.7 10.3 57.9 33.6 10.3 -43.0 -42.7 6.9 -21.0 -20.2 6.9	8 9 87 8.2 20.0 20.7 39.7 26.2 17.2 -44.5 -43.8 13.8 -20.2 -20.2 6.9	3 3 27 20.9 28.1 66.7 31.3 29.3 40.7 -47.7 -48.7 29.6 -14.3 -15.4 22.2	
10S		2 2 31 0.0 0.0 0.0 0.0 0.0 0.0 -41.1 0.0 0.0 -21.6 0.0 0.0	7 8 79 .0 .1 1.3 .8 0.0 0.0 -44.7 -49.0 0.0 -19.6 -17.8 0.0	4 4 38 1.6 9.2 5.3 30.2 27.1 2.6 -50.1 -50.0 2.6 -17.1 -20.1 2.6	
20S		2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -40.9 0.0 0.0 -21.4 0.0 0.0	9 12 130 .0 .4 .8 4.3 0.0 0.0 -46.1 -51.0 0.0 -15.4 -11.2 0.0	5 8 88 1.2 5.3 8.0 15.1 11.7 5.7 -46.6 -48.1 2.3 -13.4 -15.1 0.0	
30S			17 22 206 .1 1.4 1.0 13.5 5.7 .5 -48.7 -51.0 0.0 -2.0 -6.4 0.0	10 11 86 0.0 0.0 0.0 0.0 0.0 0.0 -50.9 0.0 0.0 -3.2 0.0 0.0	
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
33.5-38.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
		1 1 7 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 5.5 0.0 0.0	1 1 7 .1 .1 14.3 .4 0.0 0.0 -44.5 -45.0 0.0 4.6 4.7 0.0	2 2 14 .0 .1 7.1 .4 0.0 0.0 -43.2 -45.0 0.0 5.1 4.7 0.0		80N
6 8 61 .0 .1 3.3 .4 0.0 0.0 -53.1 -56.5 0.0 .4 -2.1 0.0	12 14 163 .7 6.5 4.9 14.2 25.7 1.8 -50.3 -55.3 .6 2.3 .1 .6	6 6 72 0.0 0.0 0.0 0.0 0.0 0.0 -45.3 0.0 0.0 4.7 0.0 0.0	7 9 98 0.0 0.0 0.0 0.0 0.0 0.0 -47.9 0.0 0.0 2.8 0.0 0.0	33 39 410 .4 4.3 2.7 13.0 23.1 1.0 -49.3 -55.7 .5 2.5 -.7 .2		70N
11 13 117 3.6 12.2 17.9 20.2 22.1 8.5 -50.4 -56.1 5.1 .7 -2.3 .9	25 34 384 2.2 10.5 7.8 28.2 26.1 4.9 -50.9 -54.6 3.4 1.2 -2.8 1.8	4 5 55 .7 1.8 16.4 4.1 2.3 0.0 -49.5 -53.8 0.0 1.5 -2.9 0.0	33 37 202 1.2 5.9 8.9 13.6 15.0 4.0 -52.8 -55.9 2.0 .5 -2.2 0.0	80 99 865 2.0 9.0 10.3 19.0 21.6 4.9 -50.7 -55.4 2.8 1.1 -2.3 .9		60N
27 32 282 7.4 18.0 25.2 29.2 25.3 17.0 -50.6 -54.7 11.7 -5.3 -7.2 4.6	75 88 825 8.3 21.1 23.2 35.7 30.6 16.1 -49.9 -51.6 12.6 -9.2 -9.4 7.4	12 17 153 10.0 21.0 32.7 30.5 26.9 23.5 -51.7 -52.3 13.7 -2.1 -3.9 9.8	6 6 41 3.5 13.5 12.2 29.1 27.3 9.8 -54.5 -55.0 4.9 -.8 -.1 2.4	150 185 1765 8.5 20.6 25.8 33.1 28.9 17.8 -50.2 -52.3 12.7 -6.8 -8.1 7.5		50N
83 125 1393 2.4 11.8 7.0 35.0 29.5 4.7 -50.1 -52.8 3.7 -10.9 -8.7 1.9	47 61 605 2.5 10.9 11.2 22.6 24.4 6.3 -48.7 -51.1 3.6 -12.9 -11.8 1.7			181 244 2415 3.1 13.0 9.6 32.3 28.4 6.4 -48.7 -50.9 4.7 -12.5 -11.1 2.4		40N
64 110 1417 1.8 10.1 7.0 25.7 29.3 4.0 -49.2 -51.0 2.5 -13.0 -12.2 1.4				75 126 1577 1.8 10.2 6.5 27.3 30.0 3.9 -48.3 -50.6 2.5 -13.6 -12.4 1.5		30N
4 5 54 .5 1.6 11.1 4.2 2.7 0.0 -47.5 -45.7 0.0 -18.9 -23.2 0.0				16 19 187 20.2 29.1 51.9 39.0 30.0 39.6 -44.8 -43.9 31.0 -19.9 -20.0 19.3		20N
3 3 24 12.6 27.1 20.8 60.5 25.0 20.8 -46.3 -49.0 20.8 -23.3 -23.0 12.5				14 14 151 7.9 20.1 25.8 30.5 29.6 15.9 -44.4 -44.7 11.9 -20.7 -20.6 6.0		10N
				15 16 143 10.1 22.5 27.3 37.2 29.2 20.3 -44.4 -46.0 15.4 -19.9 -18.0 9.8		0
				13 14 148 .4 4.7 2.0 20.4 26.1 .7 -45.3 -49.7 .7 -19.4 -19.3 .7		10S
				16 22 225 .5 3.3 3.6 13.8 11.5 2.2 -46.1 -48.5 .9 -14.9 -14.7 0.0		20S
				27 33 292 .1 1.2 .7 13.5 5.7 .3 -49.4 -51.0 0.0 -2.4 -6.4 0.0		30S
						40S

# APPENDIX D

Code:

AUTUMN  
33.5-38.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				1 0.0 0.0 -50.0 .6	1 0.0 0.0 0.0 0.0
60N				10 4.0 43.3 -52.2 .7	16 16.1 32.8 -53.7 -5.4
50N	10 .8 19.8 -54.6 -3.5	12 5.7 20.5 -57.4 -5.9	122 4.1 3.3 .8 .8	9 2.9 47.6 -48.4 -5.5	9 9 6.1 6.1 0.0
40N	16 2.4 34.0 -53.2 -6.3	18 11.1 26.2 -58.6 -3.8	186 7.0 5.4 4.3 2.2	32 11.3 41.3 -46.5 -14.0	32 25.7 34.2 15.3 11.6
30N	1 0.0 0.0 -45.0 -21.4	1 0.0 0.0 0.0 0.0	12 0.0 0.0 0.0 0.0	7 .0 1.6 -44.9 -20.6	9 2 .2 0.0 -40.0
20N		10 5.0 30.5 -45.0 -19.6	10 15.1 24.8 -46.1 -18.4	79 16.5 13.9 7.6 2.5	3 37.2 31.0 -49.1 -19.9
10N		3 36.4 50.1 -42.8 -18.7	3 33.4 29.1 -43.4 -18.8	22 72.7 63.6 50.0 40.9	1 7.3 8.7 -49.0 -19.8
0		1 40.3 43.9 -40.0 -14.0	1 20.8 17.6 -40.7 -15.2	12 91.7 83.3 83.3 33.3	2 32.7 31.1 29.5 29.5
10S		1 6.6 25.3 -44.2 -13.0	2 15.2 20.1 -40.0 -13.6	19 26.3 21.1 10.5 5.3	2 27.3 33.3 20.5 20.5
20S		1 0.0 0.0 -45.0 -14.4	1 0.0 0.0 0.0 0.0	2 0.0 0.0 0.0 0.0	42 0.0 0.0 0.0 0.0
30S	1 0.0 0.0 -55.5 -4.2	1 0.0 0.0 0.0 0.0	2 0.0 0.0 0.0 0.0	4 .0 .8 -52.7 -3.9	5 1 0.0 -61.0 -2.4
40S				36 2.8 0.0 0.0 0.0	8 24.8 35.1 -52.5 -5.4

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
33.5-38.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -53.6 0.0 0.0 5.2 0.0 0.0	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -61.1 0.0 0.0 5.0 0.0 0.0	4 4 41 .0 .1 2.4 .4 0.0 0.0 -57.0 -62.0 0.0 3.9 .6 0.0			6 6 54 .0 .1 1.9 .4 0.0 0.0 -57.3 -62.0 0.0 4.2 .6 0.0	80N
9 10 108 .5 3.4 2.8 19.5 7.3 2.8 -54.0 -57.0 .9 2.7 -1.0 0.0	14 17 198 .8 6.9 3.0 27.3 29.4 2.0 -53.7 -59.7 1.0 3.6 -1.3 .5	5 6 46 9.5 26.3 15.2 62.5 35.1 13.0 -52.4 -60.9 13.0 2.3 -.9 8.7	1 2 26 7.0 13.5 26.9 26.1 13.3 23.1 -52.2 -58.1 15.4 2.0 1.2 0.0	30 36 379 2.2 11.6 6.1 36.6 31.0 5.0 -53.6 -59.2 3.4 3.1 -.4 1.3		70N
7 7 48 0.0 0.0 0.0 0.0 0.0 0.0 -51.8 0.0 0.0 3.0 0.0 0.0	14 23 261 3.7 12.7 14.2 26.4 23.2 9.6 -54.2 -57.0 6.1 .6 -2.8 1.9	51 72 872 6.6 21.0 12.2 54.1 32.7 10.3 -49.8 -57.9 8.8 -.1 -3.1 7.3	66 95 1116 4.7 15.7 14.8 31.5 28.8 10.5 -51.9 -58.4 6.8 -1.5 -3.4 3.6	148 213 2490 5.1 17.5 13.1 38.9 31.8 9.8 -51.4 -57.8 7.2 -.5 -3.3 4.7		60N
20 26 297 5.6 16.9 17.8 31.2 28.4 11.4 -52.5 -57.4 8.1 -6.4 -6.8 4.7	26 30 255 7.4 19.9 20.0 36.8 30.0 15.7 -52.0 -53.2 10.6 -3.7 -7.3 6.7	71 104 1114 7.2 21.6 15.7 45.9 34.7 12.1 -51.9 -57.8 9.7 -2.2 -4.5 7.1	17 22 219 3.6 13.5 13.7 26.2 27.0 9.6 -55.9 -57.8 4.6 -4.6 -6.2 2.3	178 238 2493 6.3 19.1 17.2 36.8 31.9 12.3 -52.1 -55.7 8.7 -4.0 -6.5 5.8		50N
32 42 387 3.0 13.5 9.3 32.7 31.6 5.9 -50.5 -52.9 3.9 -11.0 -10.1 2.6	18 22 134 4.2 15.2 10.4 39.8 28.0 7.5 -52.3 -52.2 6.0 -7.8 -10.2 5.2	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -46.0 0.0 0.0 -12.6 0.0 0.0	1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -56.2 0.0 0.0 -4.4 0.0 0.0	119 145 1215 6.4 19.4 17.9 35.9 32.2 12.5 -50.6 -51.3 8.7 -10.2 -11.6 6.1		40N
20 29 341 5.5 17.6 16.7 32.6 31.1 10.9 -48.6 -49.1 7.9 -14.4 -15.0 5.0	1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -43.0 0.0 0.0 -17.7 0.0 0.0		1 1 4 31.8 26.8 75.0 42.4 22.6 75.0 -49.0 -48.3 50.0 -16.0 -19.0 25.0	50 68 738 3.1 13.0 11.4 27.6 28.6 7.2 -47.0 -48.8 4.2 -16.1 -15.4 2.6		30N
9 10 113 4.9 16.9 17.7 27.8 31.3 8.0 -47.7 -49.6 6.2 -18.8 -18.0 5.3	3 3 39 0.0 0.0 0.0 0.0 0.0 0.0 -43.1 0.0 0.0 -19.4 0.0 0.0	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -43.6 0.0 0.0 -18.8 0.0 0.0		26 27 269 6.7 20.1 17.5 38.5 33.1 11.9 -46.1 -48.4 8.9 -19.2 -18.7 6.7		20N
9 9 61 4.7 15.3 14.8 31.8 27.1 11.5 -48.3 -51.4 6.6 -19.0 -17.3 3.3		1 1 16 0.0 0.0 0.0 0.0 0.0 0.0 -44.3 0.0 0.0 -19.3 0.0 0.0		22 22 161 10.3 23.1 28.0 36.7 30.5 21.1 -46.6 -47.2 14.9 -19.1 -18.2 9.3		10N
1 1 15 0.0 0.0 0.0 0.0 0.0 0.0 -50.6 0.0 0.0 -18.4 0.0 0.0		2 2 30 0.0 0.0 0.0 0.0 0.0 0.0 -46.1 0.0 0.0 -20.5 0.0 0.0		14 16 202 7.3 20.3 16.3 44.7 29.3 12.4 -45.4 -43.0 11.9 -18.7 -15.4 7.4		0
3 3 10 0.0 0.0 0.0 0.0 0.0 0.0 -51.0 0.0 0.0 -18.8 0.0 0.0		2 4 39 0.0 0.0 0.0 0.0 0.0 0.0 -46.8 0.0 0.0 -20.6 0.0 0.0		16 20 187 8.6 21.8 22.5 38.4 31.1 15.5 -45.7 -44.7 12.8 -18.3 -18.1 7.5		10S
		1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 -21.1 0.0 0.0		10 12 132 5.7 20.4 9.1 62.3 32.4 8.3 -47.0 -48.2 6.8 -13.0 -16.5 6.1		20S
				13 14 94 5.7 19.7 12.8 44.5 36.1 8.5 -51.8 -53.3 7.4 -3.6 -5.2 7.4		30S
						40S

# APPENDIX D

Code:

WINTER  
38.5-43.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				5 5 27 0.0 0.0 0.0 0.0 0.0 0.0 -49.7 0.0 0.0 7.4 0.0 0.0	
60N				13 22 274 0.0 0.0 0.0 0.0 0.0 0.0 -48.5 0.0 0.0 8.0 0.0 0.0	
50N	5 6 61 15.2 31.3 19.7 77.2 13.6 19.7 -56.5 -69.3 19.7 4.1 -2.3 19.7		10 10 102 0.0 0.0 0.0 0.0 0.0 0.0 -48.1 0.0 0.0 10.0 0.0 0.0	11 11 150 0.0 0.0 0.0 0.0 0.0 0.0 -47.0 0.0 0.0 10.1 0.0 0.0	
40N	3 4 38 0.0 0.0 0.0 0.0 0.0 0.0 -58.2 0.0 0.0 3.2 0.0 0.0		13 16 164 0.0 0.0 0.0 0.0 0.0 0.0 -51.1 0.0 0.0 4.3 0.0 0.0	9 17 207 0.0 0.0 0.0 0.0 0.0 0.0 -50.4 0.0 0.0 1.8 0.0 0.0	
30N	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -58.5 0.0 0.0 1.0 0.0 0.0		7 10 111 .2 1.4 1.8 10.6 1.6 .9 -60.2 -62.5 0.0 -15.8 -17.4 0.0	2 3 38 0.0 0.0 0.0 0.0 0.0 0.0 -48.8 0.0 0.0 -3.2 0.0 0.0	
20N		1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -58.0 0.0 0.0 -6.7 0.0 0.0	6 6 61 1.5 5.5 11.5 13.2 10.3 4.9 -57.5 -57.7 1.6 -12.2 -11.9 0.0		
10N		3 3 5 .2 .5 20.0 1.2 0.0 0.0 -53.3 -54.0 0.0 -9.4 -18.2 0.0	4 4 32 6.1 14.9 28.1 21.5 21.4 18.8 -59.5 -60.1 9.4 -14.1 -16.0 3.1	6 6 11 13.2 29.2 18.2 72.7 19.0 18.2 -58.0 -63.0 18.2 -16.6 -13.4 18.2	
0		1 1 5 55.5 36.8 80.0 69.3 27.1 80.0 -54.0 -53.8 60.0 0.0 0.0 60.0	2 2 27 62.9 27.9 96.3 65.3 25.5 88.9 -53.0 -52.9 88.9 -18.8 -18.8 66.7	12 12 108 20.0 28.5 48.1 41.6 28.0 41.7 -57.2 -60.2 31.5 -17.4 -15.5 17.6	
10S			1 1 7 53.4 32.1 85.7 62.3 25.5 85.7 -52.0 -52.0 71.4 0.0 0.0 57.1	18 21 167 21.2 30.0 54.5 38.9 31.0 43.1 -57.3 -60.1 29.9 -16.9 -16.8 18.0	
20S			2 3 26 .1 .2 7.7 .8 .4 0.0 -50.0 -57.5 0.0 -17.9 -16.4 0.0	9 9 110 4.1 14.5 13.6 29.9 27.7 8.2 -58.2 -58.7 6.4 -11.8 -15.5 3.6	
30S			4 6 75 0.0 0.0 0.0 0.0 0.0 0.0 -53.0 0.0 0.0 -6.8 0.0 0.0	19 27 305 1.0 8.0 2.6 36.4 34.2 2.0 -57.7 -62.4 1.0 -3.3 -5.0 .7	
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\overline{\text{TICIV}} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
38.5-43.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
						60N
						70N
6 7 91 0.0 0.0 0.0 0.0 0.0 0.0 -51.7 0.0 0.0 5.7 0.0 0.0	1 1 7 15.6 25.9 28.6 54.7 14.3 28.6 -65.0 -69.5 28.6 2.1 2.3 14.3				12 13 125 .9 7.1 1.6 54.7 14.3 1.6 -51.8 -69.5 1.6 5.9 2.3 .8	60N
7 11 138 0.0 0.0 0.0 0.0 0.0 0.0 -49.2 0.0 0.0 6.6 0.0 0.0	5 8 88 0.0 0.0 0.0 0.0 0.0 0.0 -52.6 0.0 0.0 7.3 0.0 0.0	5 5 32 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 8.3 0.0 0.0	2 4 44 0.0 0.0 0.0 0.0 0.0 0.0 -56.3 0.0 0.0 5.0 0.0 0.0	32 50 576 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 7.4 0.0 0.0		50N
8 8 60 .5 4.0 3.3 16.3 14.7 1.7 -56.0 -62.0 1.7 2.2 1.0 0.0	31 43 469 1.7 10.8 3.8 44.8 33.6 2.8 -54.6 -67.2 2.6 5.5 .3 1.7	8 8 82 20.7 36.3 28.0 73.9 27.8 26.8 -51.8 -69.3 24.4 6.1 -4.5 23.2	5 6 57 17.7 34.2 22.8 77.5 22.5 22.8 -56.2 -70.1 21.1 3.9 -2.5 21.1	78 92 981 4.6 18.6 6.9 65.8 30.9 6.2 -52.7 -68.7 5.8 6.5 -2.3 5.2		40N
34 51 607 1.8 11.1 4.4 39.9 35.5 2.6 -56.0 -63.9 2.5 1.6 -2.1 2.0	33 44 450 7.4 22.5 12.0 61.4 30.3 10.9 -56.7 -65.7 9.6 .2 -2.0 8.4		1 1 15 8.5 14.4 53.3 15.9 16.5 26.7 -61.1 -62.5 13.3 -8.5 -8.4 0.0	93 133 1481 3.1 14.7 6.0 50.8 34.3 4.7 -54.9 -64.9 4.1 1.6 -2.6 3.4		30N
22 32 380 1.1 8.3 3.2 33.7 32.7 2.4 -57.4 -63.5 1.3 -8.7 -6.1 .8	2 2 20 2.2 9.4 5.0 43.1 0.0 5.0 -56.4 -57.0 5.0 -15.2 -18.3 0.0			34 48 557 .8 7.1 2.7 31.2 30.4 2.0 -57.3 -62.9 1.1 -9.9 -8.4 .5		20N
18 19 251 3.3 11.4 15.1 22.0 21.2 9.2 -57.2 -58.2 6.0 -16.9 -15.6 2.0				25 26 314 3.0 10.5 14.3 20.6 20.2 8.3 -57.3 -58.1 5.1 -16.0 -15.0 1.6		10N
17 20 229 11.1 24.2 26.2 42.5 30.1 21.0 -56.4 -56.6 16.6 -17.8 -17.0 10.9				30 33 277 10.4 23.5 26.0 40.2 30.4 20.2 -56.8 -57.1 15.5 -17.1 -16.8 10.1		0
9 9 118 6.9 18.6 19.5 35.3 27.9 13.6 -54.5 -56.3 11.9 -18.8 -17.0 6.8				24 24 258 19.2 30.0 40.7 47.2 29.9 34.5 -55.5 -57.3 29.1 -18.3 -16.4 18.6		10S
8 11 143 22.4 31.3 52.4 42.6 31.7 42.7 -59.0 -64.1 32.9 -16.0 -14.5 20.3				27 33 317 22.4 31.0 54.3 41.3 31.4 43.8 -58.1 -61.6 32.2 -16.5 -15.8 19.9		20S
				11 12 136 3.3 13.1 12.5 26.5 27.7 6.6 -56.6 -58.6 5.1 -12.1 -15.6 2.9		30S
				23 33 380 .8 7.2 2.1 36.4 34.2 1.6 -56.8 -62.4 .8 -3.7 -5.0 .5		40S

# APPENDIX D

Code:

SPRING  
38.5-43.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				11 11 57 0.0 0.0 0.0 0.0 0.0 0.0 -50.8 0.0 0.0 6.7 0.0 0.0	
60N				24 44 577 .0 .0 .2 .4 0.0 0.0 -52.1 -59.0 0.0 5.7 3.2 0.0	
50N	4 6 59 0.0 0.0 0.0 0.0 0.0 0.0 -58.6 0.0 0.0 2.2 0.0 0.0		23 23 205 .0 .4 .5 5.9 0.0 0.0 -56.1 -63.0 0.0 3.3 -5.3 0.0	38 52 640 4.0 16.2 8.6 46.4 32.9 6.7 -56.1 -64.0 5.5 2.4 -3.8 4.2	
40N	3 4 37 .2 1.3 2.7 8.2 0.0 0.0 -57.6 -62.0 0.0 .7 1.5 0.0		30 33 264 8.3 24.1 17.0 48.6 37.9 12.9 -57.9 -61.6 10.2 -.2 -6.2 7.6	5 7 76 5.0 17.6 11.8 42.0 32.6 9.2 -51.3 -61.8 6.6 .6 -7.3 5.3	
30N	1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -55.8 0.0 0.0 -15.9 0.0 0.0	1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -56.5 0.0 0.0 -4.7 0.0 0.0	10 14 128 .4 3.6 5.5 7.9 13.3 .8 -57.3 -55.3 .8 -13.7 -11.6 0.0	2 3 25 .7 3.2 8.0 8.4 8.0 4.0 -57.9 -58.0 0.0 -10.4 -9.8 0.0	
20N		1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -57.5 0.0 0.0 -4.0 0.0 0.0	9 9 91 .2 1.2 3.3 4.7 4.7 1.1 -58.3 -54.0 0.0 -15.6 -9.8 0.0	3 5 69 0.0 0.0 0.0 0.0 0.0 0.0 -53.3 0.0 0.0 -14.0 0.0 0.0	
10N		3 3 6 0.0 0.0 0.0 0.0 0.0 0.0 -63.7 0.0 0.0 -14.4 0.0 0.0	4 4 36 0.0 0.0 0.0 0.0 0.0 0.0 -62.4 0.0 0.0 -15.3 0.0 0.0	7 7 13 4.9 13.4 15.4 32.2 17.3 15.4 -57.5 -57.5 7.7 -17.6 0.0 0.0	
0				14 14 113 14.4 24.9 43.4 33.1 28.3 30.1 -58.6 -59.8 21.2 -17.3 -16.2 13.3	
10S				20 23 145 6.8 18.0 24.1 28.2 27.3 16.6 -58.4 -58.4 10.3 -16.3 -17.1 5.5	
20S				5 6 72 .1 .9 4.2 3.1 2.8 0.0 -57.0 -58.7 0.0 -11.6 -15.0 0.0	
30S				13 18 182 2.8 14.5 4.9 57.3 33.6 4.9 -57.4 -62.2 3.3 1.1 -11.6 2.7	
40S					



# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
38.5-43.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
12 15 200 0.0 0.0 0.0 0.0 0.0 0.0 -49.7 0.0 0.0 6.5 0.0 0.0	3 3 28 0.0 0.0 0.0 0.0 0.0 0.0 -54.1 0.0 0.0 4.7 0.0 0.0				26 29 285 0.0 0.0 0.0 0.0 0.0 0.0 -50.4 0.0 0.0 6.4 0.0 0.0	70N
17 24 291 .0 .3 1.7 1.8 1.2 0.0 -52.0 -60.0 0.0 5.4 1.8 0.0	11 20 242 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 5.0 0.0 0.0	16 20 214 .0 .1 .5 .8 0.0 0.0 -49.0 -60.0 0.0 6.4 2.3 0.0	12 16 182 .1 .7 .5 9.4 0.0 0.0 -53.6 -65.0 0.0 4.4 -1.2 0.0	80 124 1506 .0 .3 .5 2.5 2.9 0.0 -52.2 -60.5 0.0 5.5 1.7 0.0		60N
25 45 539 2.2 10.4 8.0 27.3 26.1 5.2 -59.9 -65.1 3.5 .7 -2.3 1.5	68 79 793 6.0 19.1 13.4 44.7 31.7 10.7 -56.0 -65.0 8.6 3.4 -1.0 6.2	22 24 216 2.9 14.9 8.3 35.1 39.1 3.7 -50.7 -60.2 3.7 5.4 1.0 3.2	5 5 43 0.0 0.0 0.0 0.0 0.0 0.0 -56.1 0.0 0.0 4.1 0.0 0.0	185 234 2495 3.6 15.2 8.9 40.8 32.5 6.6 -56.5 -64.4 5.2 2.7 -1.8 3.6		50N
44 52 502 1.3 7.8 7.4 17.3 23.4 3.0 -59.7 -66.0 1.8 -.5 -2.4 .8	67 96 957 4.7 17.9 8.7 54.0 31.8 7.6 -57.5 -64.1 6.7 2.4 -2.1 4.8	3 3 47 9.3 23.8 21.3 43.6 34.2 14.9 -57.7 -67.3 14.9 1.9 -6.4 8.5		152 195 1883 4.3 17.1 9.8 44.0 35.0 7.2 -57.9 -63.9 5.9 1.1 -3.7 4.1		40N
30 44 500 1.9 10.4 6.6 28.9 29.4 3.8 -60.3 -63.3 3.0 -5.2 -9.5 1.8	3 3 34 .5 1.7 11.8 4.3 3.0 0.0 -56.3 -58.5 0.0 -6.4 -6.6 0.0	3 3 45 1.7 6.8 11.1 15.0 14.6 6.7 -61.1 -64.6 2.2 -10.9 -7.0 0.0		50 69 741 1.5 8.9 6.9 21.9 26.5 3.2 -59.5 -61.7 2.3 -7.5 -9.3 1.2		30N
13 14 152 14.9 28.2 36.2 41.1 33.4 29.6 -58.1 -59.6 17.8 -13.5 -15.4 13.8	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -56.4 0.0 0.0 -10.3 0.0 0.0	3 3 50 17.1 28.9 44.0 38.8 32.4 34.0 -55.6 -56.2 24.0 -16.6 -16.3 14.0		30 33 378 8.3 22.1 21.2 39.1 33.2 16.7 -56.8 -58.4 10.3 -14.3 -15.4 7.4		20N
13 15 138 16.1 28.5 39.1 41.1 32.4 29.0 -57.4 -57.8 23.9 -17.1 -17.4 14.5		5 5 61 13.8 27.0 36.1 38.2 33.1 23.0 -54.7 -55.6 23.0 -16.4 -14.2 13.1		32 34 254 12.3 25.7 30.7 40.0 32.3 22.0 -58.0 -57.2 18.9 -16.5 -16.2 11.0		10N
8 9 111 2.8 11.1 11.7 24.2 23.3 7.2 -55.0 -56.1 4.5 -18.1 -18.5 1.8		5 5 68 35.3 32.5 82.4 42.9 30.9 63.2 -54.3 -56.3 54.4 -17.0 -16.4 35.3		27 28 292 14.9 26.2 40.4 36.7 29.8 29.1 -56.3 -57.7 22.6 -17.8 -16.5 14.0		0
10 14 155 14.7 26.1 39.4 37.4 29.7 29.0 -63.3 -61.0 21.3 -15.6 -13.8 15.5		4 4 53 28.4 35.9 54.7 51.9 33.6 49.1 -57.7 -55.8 37.7 -16.2 -16.9 26.4		34 41 353 13.5 26.1 35.4 38.2 31.2 26.9 -60.3 -59.1 19.3 -16.0 -15.5 13.0		10S
		3 3 4 0.0 0.0 0.0 0.0 0.0 0.0 -57.8 0.0 0.0 -16.4 0.0 0.0		8 9 76 .1 .8 3.9 3.1 2.8 0.0 -57.0 -58.7 0.0 -11.9 -15.0 0.0		20S
				13 18 182 2.8 14.5 4.9 57.3 33.6 4.9 -57.4 -62.2 3.3 1.1 -11.6 2.7		30S
						40S

# APPENDIX D

Code:

SUMMER  
38.5-43.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				8 8 45 0.0 0.0 0.0 0.0 0.0 0.0 -48.2 0.0 0.0 5.5 0.0 0.0	
60N				15 26 338 .4 3.6 2.7 15.1 16.2 1.2 -50.7 -61.9 .6 4.4 .2 0.0	
50N	3 3 45 0.0 0.0 0.0 0.0 0.0 0.0 -50.3 0.0 0.0 -2.3 0.0 0.0		12 12 91 3.8 14.5 8.8 42.7 27.2 6.6 -57.5 -63.6 6.6 -4.8 -8.8 5.5	24 31 363 2.6 11.6 9.9 26.3 27.0 6.1 -55.9 -59.7 3.9 -1.8 -7.7 1.9	
40N	2 4 41 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 -16.0 0.0 0.0		17 17 110 3.4 12.8 14.5 23.3 25.6 8.2 -57.8 -58.4 3.6 -8.6 -12.9 2.7	5 5 41 3.3 11.0 17.1 19.6 19.8 7.3 -55.2 -54.4 7.3 -11.9 -13.0 0.0	
30N	2 2 6 9.2 16.6 33.3 27.6 17.8 16.7 -54.3 -55.0 16.7 -17.0 0.0 0.0		1 2 20 4.5 7.1 50.0 9.0 7.7 20.0 -51.7 -51.9 0.0 -12.1 -14.9 0.0	1 1 12 0.0 0.0 0.0 0.0 0.0 0.0 -54.0 0.0 0.0 -16.1 0.0 0.0	
20N		1 1 4 27.5 35.5 100.0 27.5 35.5 50.0 0.0 -52.3 25.0 0.0 -16.8 25.0			
10N		1 1 13 55.5 34.9 84.6 65.6 27.8 84.6 -53.5 -53.3 69.2 -16.8 -16.8 61.5	1 1 1 2.0 0.0 100.0 2.0 0.0 0.0 0.0 -53.0 0.0 0.0 -16.8 0.0	2 2 3 14.6 20.7 33.3 43.9 0.0 33.3 -57.5 -56.0 33.3 -18.8 -20.6 0.0	
0				4 4 33 22.1 29.1 54.5 40.5 28.4 42.4 -55.7 -56.2 30.3 -19.6 -19.5 24.2	
10S				3 4 41 9.8 20.7 26.8 36.4 25.1 22.0 -56.1 -56.2 17.1 -15.9 -17.8 7.3	
20S				2 3 37 .1 .6 2.7 3.5 0.0 0.0 -56.2 -56.0 0.0 -12.9 -17.9 0.0	
30S			2 2 15 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 -9.5 0.0 0.0	4 6 74 .0 .3 2.7 1.6 1.2 0.0 -51.8 -54.5 0.0 3.2 -1.7 0.0	
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
38.5-43.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
	5 5 46 0.0 0.0 0.0 0.0 0.0 0.0 -42.7 0.0 0.0 7.8 0.0 0.0	6 9 82 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 7.4 0.0 0.0	1 1 7 0.0 0.0 0.0 0.0 0.0 0.0 -42.3 0.0 0.0 7.1 0.0 0.0	12 15 135 0.0 0.0 0.0 0.0 0.0 0.0 -42.2 0.0 0.0 7.5 0.0 0.0		80N
11 19 236 .5 4.7 3.4 14.3 21.4 .8 -51.4 -62.3 .8 3.5 -1.6 .4	33 40 420 0.0 0.0 0.0 0.0 0.0 0.0 -45.7 0.0 0.0 6.5 0.0 0.0	30 47 545 .0 .0 .2 .8 0.0 0.0 -45.9 -52.0 0.0 6.9 5.1 0.0	25 25 295 .0 .2 .3 3.5 0.0 0.0 -49.1 -65.0 0.0 5.7 1.8 0.0	107 139 1541 .1 1.9 .6 11.8 19.8 .1 -47.4 -61.5 .1 6.0 -.6 .1		70N
15 18 148 0.0 0.0 0.0 0.0 0.0 0.0 -52.1 0.0 0.0 2.6 0.0 0.0	31 38 440 .0 .7 .5 9.6 3.3 .2 -50.1 -62.0 0.0 5.0 -1.6 0.0	15 23 264 .1 1.6 .8 18.6 3.7 .8 -50.1 -61.5 0.0 5.5 1.6 0.0	34 43 509 .0 .3 1.0 2.0 1.9 0.0 -51.6 -56.0 0.0 5.0 5.4 0.0	110 148 1699 .1 1.8 1.1 11.2 13.2 .4 -50.8 -60.2 .1 4.8 1.6 0.0		60N
28 36 324 3.0 11.2 14.2 21.3 22.3 8.3 -57.6 -63.3 4.6 -.8 -4.5 1.2	42 56 613 3.4 13.6 10.1 34.0 27.9 7.0 -55.4 -60.5 5.4 -2.0 -5.7 3.4	12 15 196 1.7 9.8 8.7 19.5 27.8 4.1 -54.2 -57.8 1.5 .7 -4.6 1.0	5 7 82 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 1.9 0.0 0.0	126 160 1714 2.7 11.9 9.9 27.9 27.1 6.2 -55.6 -61.0 4.1 -1.5 -5.8 2.3		50N
21 24 198 .7 4.4 5.6 13.3 13.3 3.0 -57.6 -61.9 1.0 -4.9 -9.0 0.0	29 41 391 3.8 13.5 11.8 32.3 24.9 8.4 -54.4 -57.8 6.6 -9.4 -12.7 3.1			74 91 781 2.7 11.3 10.2 26.8 24.4 6.5 -55.7 -58.2 4.5 -8.4 -12.2 1.9		40N
5 7 94 0.0 0.0 0.0 0.0 0.0 0.0 -59.3 0.0 0.0 -9.8 0.0 0.0				9 12 132 1.1 5.1 9.1 12.1 12.3 3.8 -58.0 -52.4 .8 -10.8 -14.9 0.0		30N
2 2 35 3.3 14.4 8.6 38.0 33.3 5.7 -60.2 -58.7 2.9 -12.4 -15.6 2.9				3 3 39 5.7 19.2 17.9 32.0 35.0 10.3 -60.2 -55.0 5.1 -12.4 -16.3 5.1		20N
4 4 47 19.4 32.2 40.4 48.1 34.4 27.7 -56.0 -58.8 25.5 -19.6 -18.5 21.3				8 8 64 26.3 35.4 50.0 52.5 33.5 39.1 -56.0 -56.7 34.4 -19.4 -17.9 28.1		10N
2 2 31 54.8 30.1 93.5 58.6 27.3 90.3 -55.5 -55.5 77.4 -20.2 -20.1 54.8				6 6 64 37.9 33.8 73.4 51.7 29.1 65.6 -55.6 -55.8 53.1 -19.6 -19.9 39.1		0
				3 4 41 9.8 20.7 26.8 36.4 25.1 22.0 -56.1 -56.2 17.1 -15.9 -17.8 7.3		10S
				2 3 37 .1 .6 2.7 3.5 0.0 0.0 -56.2 -56.0 0.0 -12.9 -17.9 0.0		20S
				6 8 89 .0 .3 2.2 1.6 1.2 0.0 -52.3 -54.5 0.0 1.0 -1.7 0.0		30S
						40S

# APPENDIX D

Code:

AUTUMN  
38.5-43.5 KFT

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				8 8 55 0.0 0.0 0.0 0.0 0.0 0.0 -47.6 0.0 0.0 7.5 0.0 0.0	
60N				16 28 379 .2 2.6 1.3 13.9 17.6 .5 -52.0 -55.8 .3 3.9 -5.2 0.0	
50N	3 5 53 0.0 0.0 0.0 0.0 0.0 0.0 -56.2 0.0 0.0 3.1 0.0 0.0		12 12 108 2.4 8.9 8.3 28.5 14.6 7.4 -56.2 -62.4 4.6 -1.4 -8.1 .9	27 39 526 .8 4.4 5.9 12.8 13.4 2.3 -55.4 -59.2 1.0 -1.3 -9.1 0.0	
40N	3 3 31 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 -6.1 0.0 0.0		23 23 185 5.0 18.8 10.3 49.1 35.8 7.6 -56.7 -57.1 7.0 -8.8 -13.2 5.4	12 15 159 4.3 15.0 11.9 36.0 27.0 9.4 -57.8 -55.6 6.3 -10.2 -13.7 5.0	
30N	1 1 16 .1 .4 6.3 1.6 0.0 0.0 -59.9 -61.0 0.0 -7.5 -9.2 0.0	3 3 32 0.0 0.0 0.0 0.0 0.0 0.0 -57.9 0.0 0.0 -9.7 0.0 0.0	1 2 19 4.2 12.4 21.1 19.9 20.3 10.5 -49.7 -52.0 5.3 -18.4 -18.8 5.3	3 4 54 4.7 17.0 11.1 42.7 31.2 7.4 -53.8 -56.2 7.4 -11.5 -10.9 5.6	
20N		2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 -14.1 0.0 0.0	1 1 14 0.0 0.0 0.0 0.0 0.0 0.0 -52.2 0.0 0.0 -17.8 0.0 0.0		
10N		1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -52.7 0.0 0.0 -16.9 0.0 0.0	1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -53.0 0.0 0.0 -17.0 0.0 0.0	1 1 2 32.7 32.7 50.0 65.5 0.0 50.0 -56.0 -55.0 50.0 -17.6 -17.5 50.0	
0				3 3 4 18.4 31.9 25.0 73.7 0.0 25.0 -58.7 -55.0 25.0 -16.2 -17.2 25.0	
10S				4 5 46 2.4 13.6 10.9 22.0 35.6 4.3 -58.3 -55.8 2.2 -15.5 -17.0 2.2	
20S				3 3 33 .0 .1 3.0 .8 0.0 0.0 -55.5 -56.0 0.0 -10.2 -17.6 0.0	
30S	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -61.0 0.0 0.0 -13.2 0.0 0.0			7 9 104 .0 .3 1.9 2.0 1.6 0.0 -51.1 -53.0 0.0 3.0 5.6 0.0	
40S					

# APPENDIX D

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
38.5-43.5 KFT

165W	120W	75W	30W	15E	ZONAL MEAN	
			1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -51.5 0.0 0.0 8.3 0.0 0.0		1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -51.5 0.0 0.0 8.3 0.0 0.0	80N
9 13 168 .1 .9 .6 12.2 0.0 .6 -51.9 -59.0 0.0 3.9 -2.7 0.0	2 2 14 0.0 0.0 0.0 0.0 0.0 0.0 -57.6 0.0 0.0 3.6 0.0 0.0	3 3 27 0.0 0.0 0.0 0.0 0.0 0.0 -45.6 0.0 0.0 7.7 0.0 0.0	3 5 56 0.0 0.0 0.0 0.0 0.0 0.0 -47.8 0.0 0.0 5.8 0.0 0.0	25 31 320 .0 .7 .3 12.2 0.0 .3 -50.1 -59.0 0.0 5.2 -2.7 0.0		70N
13 18 212 1.0 5.1 6.1 16.6 12.8 3.8 -53.5 -65.5 1.4 2.6 -2.3 0.0	10 14 149 0.0 0.0 0.0 0.0 0.0 0.0 -53.6 0.0 0.0 4.6 0.0 0.0	16 25 283 .0 .4 1.1 3.1 2.8 0.0 -52.8 -56.3 0.0 4.2 5.7 0.0	14 21 232 1.1 6.9 3.9 28.9 20.8 3.0 -54.3 -65.8 1.7 3.9 -2.0 .4	69 106 1255 .4 3.9 2.4 18.5 17.7 1.4 -53.0 -63.1 .6 3.8 -1.9 .1		60N
22 38 502 2.0 9.7 10.8 19.0 23.5 5.2 -58.0 -64.4 3.2 -.3 -3.3 1.6	13 18 219 2.0 9.8 6.8 29.9 24.1 5.0 -57.6 -64.1 3.7 .6 -2.7 1.4	23 29 314 4.9 18.2 10.2 47.6 35.0 7.6 -55.9 -65.5 6.7 .4 -2.3 5.1	2 2 7 .7 1.6 14.3 4.7 0.0 0.0 -56.5 -64.0 0.0 2.8 -2.1 0.0	102 143 1729 2.1 10.6 8.2 25.8 27.7 4.7 -56.6 -63.4 3.2 -.3 -4.6 1.6		50N
16 16 135 .0 .1 1.5 1.2 0.0 0.0 -58.9 -57.5 0.0 -3.7 -4.9 0.0	13 17 137 .1 1.1 .7 13.3 0.0 .7 -56.6 -51.0 0.0 -7.9 -5.4 0.0			67 74 647 2.5 12.7 6.3 39.8 32.7 4.6 -57.3 -56.2 3.6 -7.6 -12.8 2.8		40N
7 8 86 2.9 12.1 16.3 17.8 25.2 7.0 -59.4 -60.6 3.5 -11.1 -11.0 2.3	1 1 13 0.0 0.0 0.0 0.0 0.0 0.0 -52.8 0.0 0.0 -14.0 0.0 0.0		1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -57.0 0.0 0.0 -17.3 0.0 0.0	17 20 221 2.7 12.0 11.3 23.5 28.0 5.4 -56.6 -58.2 3.6 -11.5 -12.1 2.7		30N
4 4 53 8.8 19.6 30.2 29.1 26.2 20.8 -58.6 -58.2 13.2 -14.9 -16.1 7.5			1 1 6 .8 1.8 16.7 4.7 0.0 0.0 -56.0 -56.0 0.0 -18.5 -18.8 0.0	8 8 80 5.9 16.5 21.3 27.7 26.0 13.8 -56.5 -58.1 8.8 -15.7 -16.3 5.0		20N
6 6 58 4.6 17.4 8.6 53.7 29.9 6.9 -57.3 -57.0 6.9 -16.7 -15.7 5.2	1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -55.0 0.0 0.0 -16.8 0.0 0.0	1 1 13 0.0 0.0 0.0 0.0 0.0 0.0 -53.8 0.0 0.0 -17.2 0.0 0.0	1 1 5 22.7 22.4 60.0 37.8 16.3 60.0 -54.5 -55.3 40.0 -18.7 -18.8 20.0	12 12 96 4.7 16.5 9.4 49.7 25.9 8.3 -55.9 -56.2 7.3 -16.9 -16.9 5.2		10N
5 5 69 2.0 12.3 7.2 27.2 37.4 2.9 -55.6 -57.4 2.9 -17.6 -17.0 1.4		1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -55.4 0.0 0.0 -17.4 0.0 0.0	1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -54.7 0.0 0.0 -18.1 0.0 0.0	10 10 88 2.4 13.3 6.8 35.0 38.3 3.4 -55.7 -57.0 3.4 -17.6 -17.0 2.3		0
2 2 26 19.7 32.8 30.8 63.9 25.9 30.8 -57.1 -58.0 26.9 -14.9 -16.8 23.1			1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -61.2 0.0 0.0 -14.3 0.0 0.0	7 8 77 8.1 23.3 16.9 47.8 36.3 13.0 -58.2 -57.2 10.4 -15.2 -16.9 9.1		10S
			1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -60.8 0.0 0.0 -14.9 0.0 0.0	4 4 37 .0 .1 2.7 .8 0.0 0.0 -56.1 -56.0 0.0 -10.8 -17.6 0.0		20S
				8 10 105 .0 .3 1.9 2.0 1.6 0.0 -51.2 -53.0 0.0 2.9 5.6 0.0		30S
						40S



## APPENDIX E

### CLOUD-ENCOUNTER STATISTICS AS FUNCTIONS OF LATITUDE, LONGITUDE, NORTHERN HEMISPHERE SEASON, AND DISTANCE FROM THE NMC TROPOPAUSE

This appendix is a tabulation of statistics for several quantities related to cloud encounter over the geographic area covered by the GASP flights. These statistics are presented with respect to distance from the tropopause. The latitude and longitude grid chosen appears in figure D1. Subsequent pages of this appendix give statistical data within each grid cell in accordance with the code given at the top of each page. The variables in the code and their explanation are identical to those for appendix D. The season and distance from the tropopause appear near the top of each page.

# APPENDIX E

Code:

WINTER  
10-15 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	8 8 18 33.8 38.5 55.6 60.9 31.9 44.4 -40.4 -40.2 44.4 -11.6 -11.6 38.9				
40N	21 21 97 12.7 25.4 33.0 38.5 31.1 22.7 -46.9 -44.2 18.6 -12.2 -11.9 12.4		17 17 53 3.0 15.4 3.8 80.4 9.8 3.8 -43.3 -38.5 3.8 -12.1 -13.2 3.8	4 4 37 0.0 0.0 0.0 0.0 0.0 0.0 -43.7 0.0 0.0 -12.2 0.0 0.0	
30N	17 17 87 2.2 11.0 5.7 37.8 27.3 5.7 -43.0 -47.6 2.3 -12.9 -12.2 1.1	19 20 149 5.8 19.3 10.7 53.9 29.2 9.4 -45.5 -50.2 8.7 -12.3 -12.1 6.7	12 13 75 .4 3.6 1.3 31.0 0.0 1.3 -46.3 -51.0 1.3 -13.4 -10.2 0.0	6 6 27 0.0 0.0 0.0 0.0 0.0 0.0 -42.8 0.0 0.0 -13.3 0.0 0.0	
20N		5 5 13 1.0 3.4 15.4 6.7 6.3 7.7 -46.2 -50.5 0.0 -13.0 -14.3 0.0	4 4 22 5.5 16.9 27.3 20.1 27.5 9.1 -49.6 -51.2 9.1 -12.5 -11.2 4.5	1 3 45 0.0 0.0 0.0 0.0 0.0 0.0 -46.8 0.0 0.0 -12.6 0.0 0.0	
10N				1 1 2 72.7 19.0100.0 72.7 19.0100.0 0.0 -63.0100.0 0.0 -13.4100.0	
0				1 1 15 47.5 23.2100.0 47.5 23.2 93.3 0.0 -63.6 86.7 0.0 -13.6 40.0	
10S				5 5 27 35.7 36.6 70.4 50.8 33.8 63.0 -63.4 -65.8 48.1 -14.0 -14.0 33.3	
20S		1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -46.0 0.0 0.0 -14.5 0.0 0.0	1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 -13.5 0.0 0.0	15 15 56 2.9 7.6 17.9 16.4 10.1 10.7 -54.5 -52.1 3.6 -13.2 -12.2 0.0	
30S		1 1 7 0.0 0.0 0.0 0.0 0.0 0.0 -47.6 0.0 0.0 -14.0 0.0 0.0	22 27 203 2.1 10.6 8.4 24.8 27.9 4.4 -48.7 -44.1 2.5 -12.6 -13.0 1.5	30 31 162 8.0 21.5 21.0 38.1 32.6 14.8 -47.4 -44.5 11.1 -12.0 -13.0 8.0	
40S					



# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
10-15 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
						60N
		1 1 11 45.7 27.9 90.9 50.2 25.1 81.8 -54.0 -53.6 81.8 -10.1 -11.4 36.4	15 15 33 17.6 30.2 33.3 52.7 29.7 27.3 -41.4 -37.8 24.2 -11.7 -12.6 18.2	16 16 44 24.6 32.0 47.7 51.5 27.6 40.9 -41.9 -45.3 38.6 -11.6 -12.0 22.7		
7 7 21 4.2 15.0 14.3 29.2 29.1 9.5 -43.4 -45.0 4.8 -12.1 -10.2 4.8	21 21 40 11.5 28.2 22.5 51.0 38.8 15.0 -37.2 -37.7 15.0 -12.3 -12.0 10.0	28 30 117 27.1 35.1 50.4 53.7 31.9 44.4 -42.6 -50.7 38.5 -11.6 -12.3 29.1	11 11 36 12.7 23.9 41.7 30.4 28.9 25.0 -43.3 -44.8 19.4 -11.7 -11.7 8.3	75 77 232 20.6 32.7 41.4 49.8 33.5 33.2 -41.5 -47.3 28.9 -11.9 -12.0 21.1		50N
58 59 237 12.5 24.8 30.8 40.7 29.3 24.9 -47.1 -49.9 18.6 -12.1 -11.7 11.8	38 40 115 13.1 26.4 31.3 42.0 32.0 26.1 -45.4 -46.6 19.1 -12.3 -12.8 11.3	3 3 8 51.2 30.4 100.0 51.2 30.4 87.5 0.0 -40.5 75.0 0.0 -12.7 50.0		141 144 547 11.5 24.6 27.6 41.6 30.7 21.9 -45.9 -47.3 16.8 -12.2 -12.1 10.8		40N
85 94 655 17.7 28.9 42.1 41.9 31.2 33.1 -50.5 -49.0 25.2 -12.5 -12.4 17.1	1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -55.2 0.0 0.0 -11.9 0.0 0.0		1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 -14.5 0.0 0.0	141 152 1003 12.6 25.3 29.7 42.4 31.1 23.6 -48.0 -49.0 18.0 -12.6 -12.4 12.3		30N
10 11 62 11.6 22.8 38.7 30.0 28.1 25.8 -58.2 -57.9 19.4 -13.8 -14.0 11.3				20 23 142 6.0 17.3 22.5 26.7 27.9 13.4 -51.1 -56.2 9.9 -13.1 -13.5 5.6		20N
6 6 25 25.2 32.9 44.0 57.3 24.8 44.0 -53.9 -63.0 36.0 -13.0 -13.6 28.0				7 7 27 28.7 34.4 48.1 59.7 24.7 48.1 -53.9 -63.0 40.7 -13.0 -13.6 33.3		10N
				1 1 15 47.5 23.2 100.0 47.5 23.2 93.3 0.0 -63.6 36.7 0.0 -13.6 40.0		0
4 7 77 27.0 31.5 68.8 39.2 31.1 54.5 -64.8 -65.8 39.0 -14.0 -13.9 23.4				9 12 104 29.3 33.1 69.2 42.3 32.2 56.7 -64.4 -65.8 41.3 -14.0 -13.9 26.0		10S
				17 17 63 2.6 7.2 15.9 16.4 10.1 9.5 -52.9 -52.1 3.2 -13.2 -12.2 0.0		20S
				53 59 372 4.6 16.5 13.7 33.6 31.8 8.9 -48.2 -44.4 6.2 -12.4 -13.0 4.3		30S
						40S

# APPENDIX E

Code:

SPRING  
10-15 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	5 5 5 0.0 0.0 0.0 0.0 0.0 0.0 -33.6 0.0 0.0 -13.4 0.0 0.0				7 7 43 6.7 19.1 18.6 35.8 30.3 11.6 -57.4 -56.3 11.6 -11.8 -12.3 4.7
40N	8 8 16 0.0 0.0 0.0 0.0 0.0 0.0 -39.3 0.0 0.0 -12.2 0.0 0.0		44 45 145 15.1 29.0 32.4 46.6 33.7 26.9 -45.9 -48.1 19.3 -12.3 -11.8 15.2	4 4 21 17.0 24.0 66.7 25.4 25.4 38.1 -44.3 -46.2 28.6 -12.6 -13.4 14.3	
30N	2 2 3 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 -13.6 0.0 0.0	10 11 83 8.4 22.9 18.1 46.7 33.3 14.5 -45.1 -49.7 13.3 -12.5 -12.1 8.4	19 20 110 6.6 17.5 24.5 26.8 26.5 15.5 -50.9 -48.6 9.1 -12.5 -12.7 5.5	8 10 135 5.4 14.2 25.9 20.9 21.4 13.3 -50.0 -48.4 9.6 -12.9 -13.3 3.7	
20N		7 7 29 9.2 18.8 27.6 33.4 21.8 24.1 -45.9 -46.9 17.2 -12.6 -11.7 6.9	14 14 72 .3 1.4 8.3 3.1 4.0 1.4 -48.6 -44.8 0.0 -12.9 -12.7 0.0	8 13 174 4.7 17.0 10.3 45.9 29.9 9.2 -48.7 -47.2 7.5 -13.1 -13.7 4.6	
10N		4 4 10 0.0 0.0 0.0 0.0 0.0 0.0 -56.8 0.0 0.0 -12.8 0.0 0.0	3 3 24 .6 2.3 8.3 7.1 4.3 4.2 -61.5 -45.5 0.0 -14.2 -13.7 0.0		
0				2 2 21 23.4 32.4 57.1 40.9 33.5 38.1 -48.4 -63.6 33.3 -14.6 -14.6 23.8	
10S				7 7 41 3.1 9.4 17.1 18.2 15.7 12.2 -58.9 -61.6 2.4 -13.4 -14.0 2.4	
20S				7 8 48 .2 1.0 4.2 4.5 2.5 0.0 -56.6 -58.0 0.0 -12.4 -14.3 0.0	
30S				12 12 23 3.8 17.9 4.3 87.8 0.0 4.3 -49.3 -61.0 4.3 -12.9 -14.8 4.3	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
10-15 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
		1 1 6	17 17 28	18 18 34		60N
		0.0 0.0 0.0	5.2 15.5 25.0	4.3 14.2 20.6		
		0.0 0.0 0.0	20.8 25.1 10.7	20.8 25.1 8.8		
		-37.5 0.0 0.0	-37.2 -32.9 10.7	-37.3 -32.9 8.8		
		-13.0 0.0 0.0	-12.6 -12.8 3.6	-12.7 -12.8 2.9		50N
7 7 19	54 54 63	37 38 80	11 11 42	121 122 252		
2.4 6.3 31.6	11.5 24.7 27.0	13.6 26.4 31.3	5.8 16.1 26.2	9.5 22.3 26.6		
7.6 9.3 10.5	42.7 30.4 20.6	43.5 30.4 25.0	22.2 24.9 14.3	35.7 30.6 18.3		
-45.7 -55.8 5.3	-34.1 -34.7 17.5	-40.4 -39.8 21.3	-39.3 -46.4 9.5	-42.1 -43.0 15.1		
-12.9 -12.2 0.0	-12.4 -12.6 11.1	-12.1 -12.0 13.8	-12.3 -11.8 4.8	-12.2 -12.2 8.7		40N
47 47 234	52 52 67	5 5 10		160 161 493		
2.2 9.7 12.8	11.1 23.8 28.4	2.4 6.7 20.0		7.7 20.8 22.7		
16.8 22.0 5.6	39.2 30.0 20.9	12.0 10.4 10.0		34.1 31.8 15.2		
-46.8 -45.5 3.0	-37.9 -37.6 16.4	-49.9 -29.5 0.0		-45.2 -45.1 10.5		
-12.0 -11.7 1.3	-12.3 -12.5 11.9	-12.1 -11.6 0.0		-12.1 -12.1 7.3		30N
98 103 601	11 11 69	7 7 27		155 164 1028		
6.0 18.1 19.3	9.7 23.1 27.5	4.3 13.3 11.1		6.4 18.3 20.9		
30.9 30.5 13.0	35.2 32.2 15.9	38.4 16.4 11.1		30.4 29.6 13.5		
-49.3 -49.9 9.0	-49.9 -47.3 13.0	-56.5 -49.3 7.4		-49.5 -49.2 9.6		
-12.2 -12.7 4.5	-12.5 -12.8 10.1	-12.9 -13.5 3.7		-12.4 -12.8 5.2		20N
15 15 77	8 8 73	6 6 21		58 63 446		
8.4 22.2 19.5	10.5 23.7 31.5	29.1 37.0 57.1		7.0 20.3 18.4		
43.1 32.1 14.3	33.3 32.1 19.2	50.9 35.8 38.1		38.2 32.4 12.8		
-54.4 -57.1 11.7	-51.1 -49.7 13.7	-51.2 -53.0 38.1		-49.9 -50.4 10.1		
-12.2 -13.6 6.5	-12.2 -13.4 9.6	-13.2 -13.4 33.3		-12.8 -13.3 6.5		10N
2 2 14		3 3 31		12 12 79		
21.5 31.9 42.9		42.8 40.1 71.0		20.8 34.4 38.0		
50.3 30.6 28.6		60.3 34.7 58.1		54.8 35.4 29.1		
-51.6 -48.8 28.6		-49.1 -51.3 58.1		-56.6 -50.4 27.8		
-13.2 -13.1 28.6		-13.1 -12.1 41.9		-13.5 -12.4 21.5		0
				2 2 21		
				23.4 32.4 57.1		
				40.9 33.5 38.1		
				-48.4 -63.6 33.3		
				-14.6 -14.6 23.8		10S
5 6 65				12 13 106		
19.4 27.0 49.2				13.1 23.4 36.8		
39.4 26.4 40.0				35.6 26.1 29.2		
-65.3 -59.5 29.2				-62.0 -59.8 18.9		
-14.4 -12.6 21.5				-13.9 -12.9 14.2		20S
				7 8 48		
				.2 1.0 4.2		
				4.5 2.5 0.0		
				-56.6 -58.0 0.0		
				-12.4 -14.3 0.0		30S
				12 12 23		
				3.8 17.9 4.3		
				87.8 0.0 4.3		
				-49.3 -61.0 4.3		
				-12.9 -14.8 4.3		40S

# APPENDIX E

Code:

SUMMER  
10-15 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	10 10 36 3.6 15.9 8.3 43.8 35.7 5.6 -40.8 -37.0 5.6 -12.3 -12.0 2.8		7 7 16 3.4 12.4 12.5 27.5 23.9 6.3 -53.5 -54.5 6.3 -11.6 -12.6 6.3	14 14 114 15.3 23.9 50.9 30.0 26.1 35.1 -50.9 -50.7 23.7 -12.2 -12.1 12.3	
40N	9 10 43 3.8 12.3 18.6 20.4 21.6 9.3 -41.8 -38.9 7.0 -12.8 -13.3 4.7		23 23 84 12.6 25.7 35.7 35.3 32.4 21.4 -51.9 -51.3 16.7 -12.4 -13.0 11.9	12 12 56 5.6 14.4 23.2 24.0 21.2 14.3 -49.5 -52.5 8.9 -13.1 -13.4 3.6	
30N		3 3 18 4.1 16.9 5.6 73.7 0.0 5.6 -39.8 -40.0 5.6 -13.2 -14.9 5.6	1 1 7 9.0 9.3 71.4 12.6 8.6 42.9 -51.5 -51.8 0.0 -12.1 -13.5 0.0	1 2 26 0.0 0.0 0.0 0.0 0.0 0.0 -49.0 0.0 0.0 -13.9 0.0 0.0	
20N		1 1 5 7.3 7.0 60.0 12.2 4.7 40.0 -39.0 -38.7 0.0 -14.5 -14.7 0.0			
10N					
0				1 1 17 18.7 27.3 58.8 31.8 29.1 35.3 -47.3 -48.3 29.4 -13.7 -13.3 23.5	
10S				3 3 17 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 -13.0 0.0 0.0	
20S			11 11 48 .1 .6 2.1 4.3 0.0 0.0 -44.6 -51.0 0.0 -12.8 -11.2 0.0	5 6 45 .1 .4 2.2 2.7 0.0 0.0 -50.7 -43.0 0.0 -12.6 -14.2 0.0	
30S			17 17 48 .4 2.7 4.2 10.6 8.2 2.1 -43.0 -36.0 0.0 -12.3 -12.0 0.0	7 7 22 2.5 11.6 4.5 55.7 0.0 4.5 -44.9 -41.0 4.5 -12.2 -12.5 4.5	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
10-15 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
						60N
			10 10 12 5.9 19.7 8.3 71.4 0.0 8.3 -33.9 -31.0 8.3 -12.2 -10.9 8.3		10 10 12 5.9 19.7 8.3 71.4 0.0 8.3 -33.9 -31.0 8.3 -12.2 -10.9 8.3	50N
10 12 62 6.8 15.4 37.1 18.4 20.6 16.1 -50.2 -52.9 8.1 -13.2 -12.1 4.8	56 58 395 9.8 24.2 24.1 40.8 34.1 17.0 -49.5 -49.2 13.9 -12.6 -12.4 10.4	10 10 16 16.6 28.8 37.5 44.2 31.4 25.0 -43.6 -49.3 25.0 -12.1 -12.4 18.8	6 6 14 5.0 15.1 28.6 17.5 24.1 7.1 -35.7 -36.0 7.1 -12.1 -11.5 7.1		113 117 653 10.1 23.0 29.2 34.4 31.2 19.1 -48.8 -49.7 14.5 -12.5 -12.3 9.8	40N
72 79 644 2.9 13.9 6.8 41.9 34.4 4.8 -49.4 -51.8 3.9 -12.3 -11.8 2.6	37 43 378 3.7 12.8 14.6 25.5 23.9 9.0 -52.0 -53.8 6.1 -13.2 -13.5 2.4	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -34.0 0.0 0.0 -11.0 0.0 0.0			154 168 1206 4.0 14.9 12.4 31.9 29.8 7.9 -50.1 -51.8 5.8 -12.7 -12.9 3.3	30N
66 74 702 2.9 13.2 10.0 29.5 31.1 6.1 -49.5 -50.7 4.0 -12.6 -12.8 2.6					71 80 753 2.9 13.1 10.1 29.0 30.7 6.2 -49.3 -50.6 3.9 -12.7 -12.9 2.5	20N
3 3 21 0.0 0.0 0.0 0.0 0.0 0.0 -57.5 0.0 0.0 -12.5 0.0 0.0					4 4 26 1.4 4.2 11.5 12.2 4.7 7.7 -55.9 -38.7 0.0 -12.7 -14.7 0.0	10N
1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -60.5 0.0 0.0 -12.9 0.0 0.0					1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -60.5 0.0 0.0 -12.9 0.0 0.0	0
					1 1 17 18.7 27.3 58.8 31.8 29.1 35.3 -47.3 -48.3 29.4 -13.7 -13.3 23.5	10S
					3 3 17 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 -13.0 0.0 0.0	20S
					16 17 93 .1 .5 2.2 3.5 .8 0.0 -47.5 -47.0 0.0 -12.7 -12.7 0.0	30S
					24 24 70 1.1 6.9 4.3 25.6 22.3 2.9 -43.6 -37.7 1.4 -12.3 -12.1 1.4	40S

# APPENDIX E

Code:

AUTUMN  
10-15 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N				2 2 17 8.5 17.8 23.5 36.1 18.5 23.5 -50.8 -53.8 11.8 -12.1 -13.2 5.9	
50N	13 13 63 14.2 27.0 31.7 44.7 30.5 27.0 -41.8 -46.0 20.6 -11.5 -11.4 12.7		6 6 19 5.0 14.6 10.5 47.6 1.8 10.5 -46.5 -49.0 10.5 -12.6 -12.9 0.0	21 23 188 7.5 17.1 30.3 24.6 23.4 19.1 -51.5 -53.0 11.2 -12.4 -12.1 5.9	
40N	16 16 75 0.0 0.0 0.0 0.0 0.0 0.0 -44.9 0.0 0.0 -12.5 0.0 0.0		37 37 151 11.6 25.4 28.5 40.8 32.7 21.2 -50.2 -49.7 16.6 -12.3 -13.0 11.3	22 25 200 8.8 19.6 32.5 27.2 26.2 22.5 -52.0 -50.4 11.5 -12.4 -12.5 7.0	
30N	2 2 9 17.1 32.3 33.3 51.2 37.0 22.2 -45.3 -43.0 22.2 -13.5 -11.8 22.2	10 10 88 .2 1.5 2.3 9.4 2.7 1.1 -46.3 -49.5 0.0 -12.7 -12.9 0.0		6 6 68 6.2 14.9 27.9 22.1 21.0 16.2 -50.8 -48.2 10.3 -12.3 -12.2 2.9	
20N		1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -54.4 0.0 0.0 -11.2 0.0 0.0			
10N					
0		1 1 6 31.4 16.6 83.3 37.6 9.7 83.3 -40.0 -40.4 83.3 -14.0 -14.6 16.7	2 2 30 22.0 32.9 40.0 55.1 29.8 33.3 -41.9 -41.8 33.3 -14.6 -14.8 23.3	1 1 3 9.5 9.0 66.7 14.3 7.3 33.3 -51.0 -51.5 0.0 -14.6 -15.0 0.0	
10S		1 2 19 6.6 15.2 26.3 25.3 20.1 21.1 -44.2 -40.0 10.5 -13.0 -13.6 5.3	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -42.0 0.0 0.0 -15.0 0.0 0.0	3 3 19 0.0 0.0 0.0 0.0 0.0 0.0 -58.7 0.0 0.0 -13.7 0.0 0.0	
20S		1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -45.0 0.0 0.0 -14.4 0.0 0.0	2 2 17 0.0 0.0 0.0 0.0 0.0 0.0 -44.2 0.0 0.0 -13.7 0.0 0.0	9 10 57 3.2 15.3 7.0 45.3 38.0 5.3 -47.8 -49.5 3.5 -12.9 -13.6 3.5	
30S	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -61.0 0.0 0.0 -13.2 0.0 0.0		7 7 14 0.0 0.0 0.0 0.0 0.0 0.0 -45.9 0.0 0.0 -12.1 0.0 0.0	8 8 19 20.4 33.1 31.6 64.4 25.0 31.6 -40.2 -43.2 26.3 -12.1 -12.2 26.3	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
10-15 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -56.5 0.0 0.0 -11.9 0.0 0.0		6 6 23 0.0 0.0 0.0 0.0 0.0 0.0 -43.6 0.0 0.0 -11.6 0.0 0.0	48 49 172 8.5 20.2 30.8 27.5 28.3 18.0 -38.1 -40.0 12.8 -11.9 -12.5 7.0	57 58 214 7.5 19.0 26.6 28.1 27.8 16.4 -40.2 -40.9 11.2 -11.9 -12.6 6.1		60N
19 20 149 4.0 15.5 9.4 42.5 30.1 6.7 -46.7 -52.4 6.7 -12.7 -11.6 4.0	20 20 51 17.4 32.7 33.3 52.1 37.4 25.5 -46.1 -45.4 21.6 -11.4 -11.7 17.6	57 58 224 13.4 28.0 24.1 55.7 29.9 21.9 -41.4 -45.5 18.8 -12.4 -11.2 14.7	25 25 63 2.5 10.8 11.1 22.2 24.7 6.3 -43.8 -42.9 3.2 -11.9 -11.5 3.2	161 165 757 9.3 22.8 22.6 41.1 31.6 17.3 -45.6 -48.5 13.3 -12.3 -11.6 9.1		50N
32 32 179 3.8 15.1 11.7 32.4 31.8 7.8 -48.8 -48.3 5.6 -12.6 -12.0 2.8	27 30 124 10.6 25.2 21.0 50.5 31.8 16.1 -50.3 -46.3 14.5 -12.3 -11.7 12.9	3 3 3 0.0 0.0 0.0 0.0 0.0 0.0 -34.7 0.0 0.0 -11.8 0.0 0.0		137 143 732 7.5 20.4 21.2 35.6 31.1 15.2 -49.5 -49.2 10.4 -12.5 -12.4 7.1		40N
21 23 224 6.9 20.0 21.4 32.3 32.4 11.6 -52.1 -51.4 10.7 -12.6 -13.9 6.7	1 1 13 0.0 0.0 0.0 0.0 0.0 0.0 -52.8 0.0 0.0 -14.0 0.0 0.0			40 42 402 5.3 17.2 17.9 29.8 30.4 10.0 -50.3 -50.2 8.2 -12.7 -13.3 4.7		30N
5 5 42 7.5 20.6 21.4 35.0 32.0 11.9 -57.8 -56.8 9.5 -14.1 -14.6 9.5				6 6 47 6.7 19.6 19.1 35.0 32.0 10.6 -57.4 -56.8 8.5 -13.7 -14.6 8.5		20N
2 2 9 0.0 0.0 0.0 0.0 0.0 0.0 -52.1 0.0 0.0 -13.5 0.0 0.0				2 2 9 0.0 0.0 0.0 0.0 0.0 0.0 -52.1 0.0 0.0 -13.5 0.0 0.0		10N
				4 4 39 22.5 30.1 48.7 46.2 27.7 41.0 -42.3 -42.5 38.5 -14.6 -14.8 20.5		0
2 2 11 0.0 0.0 0.0 0.0 0.0 0.0 -56.5 0.0 0.0 -13.5 0.0 0.0			1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -62.5 0.0 0.0 -13.4 0.0 0.0	8 9 55 2.3 9.5 9.1 25.3 20.1 7.3 -53.8 -40.0 3.6 -13.5 -13.6 1.8		10S
			1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -60.5 0.0 0.0 -14.3 0.0 0.0	13 14 78 2.3 13.2 5.1 45.3 38.0 3.8 -47.3 -49.5 2.6 -13.2 -13.6 2.6		20S
				16 16 34 11.4 26.7 17.6 64.4 25.0 17.6 -43.8 -43.2 14.7 -12.1 -12.2 14.7		30S
						40S

# APPENDIX E

WINTER  
5-10 KFT  
BELOW TROP

Code:

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	17 18 129 12.5 28.0 24.0 51.9 34.9 20.2 -48.0 -50.1 14.7 -7.1 -6.5 13.2		1 1 1 47.1 0.0 100.0 47.1 0.0 100.0 0.0 -48.0 100.0 0.0 -8.5 0.0		
40N	29 31 253 14.1 27.5 28.9 48.9 30.2 24.9 -48.6 -49.1 19.8 -7.4 -7.5 13.4		24 24 96 3.2 11.9 10.4 30.9 22.6 10.4 -48.1 -49.8 4.2 -7.3 -7.0 1.0	6 6 55 7.8 21.6 18.2 43.1 32.4 12.7 -46.4 -52.5 10.9 -6.8 -6.3 10.9	
30N	11 11 47 7.1 21.8 10.6 66.9 21.5 10.6 -45.7 -45.2 10.6 -8.2 -7.9 6.4	16 16 115 6.2 17.2 20.9 29.8 26.8 13.9 -47.5 -52.9 9.6 -7.7 -7.1 3.5	4 4 11 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 -7.4 0.0 0.0	4 4 25 0.0 0.0 0.0 0.0 0.0 0.0 -48.8 0.0 0.0 -7.8 0.0 0.0	
20N		2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -53.0 0.0 0.0 -7.2 0.0 0.0	3 3 27 1.5 5.5 14.8 10.2 10.8 3.7 -56.7 -56.0 3.7 -6.0 -7.9 0.0		
10N		1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -57.3 0.0 0.0 -7.4 0.0 0.0	1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -58.0 0.0 0.0 -7.0 0.0 0.0		
0					
10S					
20S					
30S				6 6 17 0.0 0.0 0.0 0.0 0.0 0.0 -60.4 0.0 0.0 -8.1 0.0 0.0	
40S			13 14 87 4.2 16.3 8.0 52.2 28.1 8.0 -50.1 -50.0 6.9 -7.9 -7.9 4.6	24 26 198 5.5 18.5 14.1 39.2 33.2 9.6 -54.6 -50.3 7.6 -7.2 -7.4 5.1	



# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
5-10 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
	1 1 11 56.6 34.0 90.9 62.2 30.3 90.9 -52.0 -52.7 72.7 -6.8 -6.6 63.6	6 6 13 41.5 43.5 53.8 77.1 27.9 53.8 -56.3 -61.3 46.2 -6.2 -6.2 46.2	33 33 154 23.4 33.0 50.6 46.2 33.2 37.0 -51.5 -55.1 33.1 -7.0 -6.9 22.1	40 40 178 26.8 35.1 53.4 50.2 33.7 41.6 -51.9 -55.3 36.5 -6.9 -6.8 26.4		60N
11 11 30 31.9 36.3 60.0 53.1 32.7 50.0 -47.7 -48.6 43.3 -7.6 -7.6 33.3	28 28 64 19.3 30.8 42.2 45.7 32.4 32.8 -47.4 -51.3 26.6 -6.8 -6.7 21.9	31 32 169 47.6 40.5 70.4 67.6 31.2 67.5 -47.2 -54.6 59.2 -7.0 -7.4 51.5	27 28 131 23.2 35.1 43.5 53.2 35.0 35.1 -50.3 -52.1 30.5 -7.2 -7.3 23.7	115 118 524 28.5 37.7 48.3 59.0 33.8 42.6 -48.4 -52.7 36.3 -7.1 -7.2 30.3		50N
89 94 594 10.9 24.5 27.8 39.3 32.4 20.7 -52.5 -53.3 15.0 -7.3 -7.3 10.1	49 49 196 15.6 27.1 35.2 44.2 28.6 30.6 -49.4 -53.0 23.0 -7.2 -7.5 15.8	3 3 9 53.4 39.5 66.7 80.1 13.9 66.7 -45.7 -42.7 66.7 -6.5 -7.9 66.7	1 1 15 8.5 14.4 53.3 15.9 16.5 26.7 -61.1 -62.5 13.3 -8.5 -8.4 0.0	201 208 1218 11.9 25.2 28.0 42.4 31.4 22.4 -50.5 -52.2 16.6 -7.3 -7.4 11.3		40N
71 76 575 7.9 19.6 24.3 32.3 28.1 17.4 -51.7 -53.5 11.5 -7.7 -8.1 6.4				106 111 773 7.2 19.0 21.9 33.0 28.4 15.7 -50.5 -53.1 10.6 -7.7 -8.0 5.7		30N
1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -61.7 0.0 0.0 -7.5 0.0 0.0				6 6 35 1.2 4.9 11.4 10.2 10.8 2.9 -56.6 -56.0 2.9 -6.4 -7.9 0.0		20N
				2 2 8 0.0 0.0 0.0 0.0 0.0 0.0 -57.8 0.0 0.0 -7.2 0.0 0.0		10N
						0
						10S
						20S
				6 6 17 0.0 0.0 0.0 0.0 0.0 0.0 -60.4 0.0 0.0 -8.1 0.0 0.0		30S
				37 40 285 5.1 17.9 12.3 41.8 32.7 9.1 -53.1 -50.2 7.4 -7.4 -7.5 4.9		40S

# APPENDIX E

Code:

SPRING  
5-10 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N	9 10 38 7.1 14.9 26.3 26.9 17.6 21.1 -43.4 -43.7 13.2 -7.2 -6.7 2.6		7 7 15 21.6 25.2 73.3 29.4 25.2 53.3 -61.8 -52.0 26.7 -5.6 -7.2 13.3	16 17 145 26.0 35.5 53.8 48.3 35.6 38.6 -57.3 -53.6 35.2 -6.9 -6.8 27.6	
40N	14 17 116 5.1 16.0 18.1 28.1 27.8 9.5 -46.0 -50.7 8.6 -8.1 -7.3 4.3	3 3 3 28.9 40.9 33.3 86.7 0.0 33.3 -50.0 -51.0 33.3 -8.8 -7.5 33.3	46 46 194 13.0 24.9 37.1 34.9 30.1 26.8 -53.6 -54.2 20.1 -7.4 -7.2 9.3	12 12 54 4.0 14.2 16.7 23.9 27.1 11.1 -53.2 -49.2 3.7 -7.3 -7.3 1.9	
30N		12 13 93 5.8 17.2 16.1 35.8 27.6 10.8 -49.5 -47.5 9.7 -8.2 -7.7 5.4	8 8 37 .1 .7 2.7 4.3 0.0 0.0 -52.8 -51.0 0.0 -7.9 -9.9 0.0	3 3 15 2.3 6.9 26.7 8.5 11.2 6.7 -54.0 -53.8 6.7 -9.4 -7.6 0.0	
20N		3 3 9 0.0 0.0 0.0 0.0 0.0 0.0 -50.1 0.0 0.0 -8.8 0.0 0.0	2 2 5 .5 .8 40.0 1.4 .6 0.0 -52.7 -55.0 0.0 -9.2 -8.6 0.0		
10N					
0					
10S					
20S					
30S				3 3 15 0.0 0.0 0.0 0.0 0.0 0.0 -54.2 0.0 0.0 -7.1 0.0 0.0	
40S				11 11 36 2.5 7.2 16.7 15.0 11.1 11.1 -54.5 -60.8 2.8 -7.4 -7.5 0.0	

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
5-10 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
						60N
1 1 3 84.1 11.4100.0 84.1 11.4100.0 0.0 -53.0100.0 0.0 -8.6100.0	5 5 44 6.8 13.6 27.3 25.0 14.9 20.5 -56.1 -55.1 13.6 -6.1 -7.1 0.0	10 10 81 24.0 29.8 67.9 35.4 30.2 45.7 -52.4 -54.3 35.8 -6.3 -6.3 22.2	35 35 115 5.6 14.0 33.0 17.0 20.0 14.8 -51.1 -49.3 7.8 -6.9 -6.9 1.7	51 51 243 12.9 23.7 44.4 29.1 28.1 27.2 -52.5 -52.6 19.3 -6.6 -6.7 9.5		
22 24 167 11.7 22.9 37.7 31.1 28.0 24.6 -56.4 -57.7 17.4 -6.8 -6.8 9.6	86 87 277 17.6 28.3 44.0 39.9 30.4 34.3 -48.2 -49.5 27.4 -7.4 -7.4 14.8	41 42 205 15.9 27.2 43.4 36.7 30.6 33.2 -50.6 -50.2 22.0 -7.2 -7.2 13.7	13 13 51 11.7 23.1 35.3 33.1 28.3 27.5 -47.0 -50.5 17.6 -7.9 -7.8 11.8	194 200 898 16.8 28.1 43.5 38.5 31.3 32.3 -51.4 -51.7 24.4 -7.2 -7.1 14.9		
102 111 803 3.0 11.9 14.1 21.5 24.7 8.2 -53.2 -54.2 4.1 -7.1 -7.1 2.1	73 73 186 12.5 25.0 31.2 40.1 30.0 25.3 -49.7 -50.6 18.8 -7.0 -7.0 10.8	8 8 32 9.1 18.2 31.3 29.2 21.9 21.9 -56.8 -59.8 18.8 -7.8 -7.8 6.3		258 270 1368 6.1 17.7 20.5 29.8 28.7 13.7 -52.3 -53.2 9.1 -7.3 -7.1 4.6		
95 102 860 4.1 13.8 16.2 25.5 25.3 9.7 -53.8 -55.6 6.7 -7.8 -7.6 3.1	8 8 37 3.6 11.0 18.9 19.0 18.7 8.1 -52.7 -53.9 5.4 -8.0 -7.6 0.0	6 6 24 3.1 9.0 16.7 18.5 14.2 12.5 -59.1 -64.3 4.2 -8.6 -7.6 0.0		132 140 1066 4.1 13.7 15.9 25.5 25.2 9.4 -53.5 -55.0 6.7 -7.9 -7.6 3.0		
6 6 22 6.4 21.5 9.1 70.8 22.9 9.1 -57.9 -67.0 9.1 -8.2 -7.9 4.5	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -56.0 0.0 0.0 -9.9 0.0 0.0			12 12 38 3.8 16.6 10.5 36.1 38.3 5.3 -55.3 -61.0 5.3 -8.6 -8.3 2.6		
						10N
						0
						10S
						20S
					3 3 15 0.0 0.0 0.0 0.0 0.0 0.0 -54.2 0.0 0.0 -7.1 0.0 0.0	
					11 11 36 2.5 7.2 16.7 15.0 11.1 11.1 -54.5 -60.8 2.8 -7.4 -7.5 0.0	
						40S

# APPENDIX E

Code:

SUMMER  
5-10 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N				1 17.3 34.5 -51.0 -9.1	1 17.3 0.0 -51.0 -6.2
40N	13 2.9 15.9 -45.4 -7.7	14 12.3 25.3 -44.7 -6.7	67 17.9 4.5 3.0	11 6.0 41.5 -55.1 -7.1	11 18.3 28.9 -63.7 -8.5
30N	6 1.9 7.6 -46.2 -7.5	6 4.8 7.1 -44.5 -7.0	24 25.0 8.3 0.0 0.0	14 3.8 22.4 -57.6 -7.1	14 11.4 18.7 -51.1 -8.1
20N		1 0.0 0.0 -38.7 -9.5	1 0.0 0.0 0.0 0.0	3 0.0 0.0 0.0 0.0	1 0.0 0.0 0.0 0.0
10N					
0					
10S					
20S				1 0.0 0.0 -48.0 -8.8	1 0.0 0.0 0.0 0.0
30S			7 0.0 0.0 -43.8 -8.2	7 0.0 0.0 0.0 0.0	24 0.0 0.0 0.0 0.0
40S			17 1.0 19.4 -47.7 -7.2	18 4.8 8.3 -48.8 -7.7	75 5.3 4.0 1.3 0.0

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
5-10 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -48.0 0.0 0.0 -7.9 0.0 0.0	7 7 26 7.2 14.5 34.6 20.7 18.1 23.1 -50.9 -49.0 11.5 -6.9 -7.6 3.8	1 1 4 .9 1.5 25.0 3.5 0.0 0.0 -51.0 -51.0 0.0 -5.4 -5.3 0.0	28 28 68 8.8 21.3 29.4 29.8 30.2 14.7 -48.4 -43.5 11.8 -6.8 -6.9 7.4	38 38 102 8.0 19.2 30.4 26.5 26.8 16.7 -49.1 -45.5 11.8 -6.8 -7.1 5.9		60N
22 24 160 7.1 16.4 28.8 24.7 22.2 18.8 -54.0 -58.8 13.8 -7.5 -7.4 2.5	52 54 335 7.0 18.7 22.4 31.4 28.2 14.6 -53.2 -53.4 11.0 -7.9 -7.6 6.6	16 16 57 8.7 18.9 26.3 33.0 23.6 19.3 -52.6 -48.7 14.0 -7.2 -7.8 10.5	6 6 17 2.2 7.3 11.8 18.4 12.2 5.9 -43.4 -46.5 5.9 -7.3 -6.8 0.0	143 149 854 8.0 19.7 25.8 31.0 28.1 16.9 -52.6 -54.2 12.5 -7.6 -7.4 7.1		50N
63 70 490 1.4 7.1 6.9 19.8 19.0 3.9 -52.6 -53.6 2.2 -7.9 -8.4 .8	28 29 114 4.9 16.1 13.2 37.5 27.6 9.6 -53.1 -53.2 8.8 -7.5 -7.6 4.4	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -35.0 0.0 0.0 -9.6 0.0 0.0		118 126 708 2.3 9.8 9.6 23.9 22.1 5.9 -52.9 -52.4 4.0 -7.8 -8.0 1.4		40N
34 41 424 .8 6.3 4.2 17.7 25.3 1.7 -52.8 -52.7 1.2 -7.9 -8.3 .5				36 43 431 .7 6.3 4.2 17.7 25.3 1.6 -52.7 -52.7 1.2 -7.9 -8.3 .5		30N
2 2 19 1.1 4.6 5.3 20.4 0.0 5.3 -58.5 -66.0 0.0 -9.0 -8.9 0.0				2 2 19 1.1 4.6 5.3 20.4 0.0 5.3 -58.5 -66.0 0.0 -9.0 -8.9 0.0		20N
1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -60.0 0.0 0.0 -9.7 0.0 0.0				1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -60.0 0.0 0.0 -9.7 0.0 0.0		10N
						0
						10S
					1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -48.0 0.0 0.0 -8.8 0.0 0.0	20S
					12 13 65 .8 4.7 4.6 17.8 13.5 3.1 -47.0 -48.0 1.5 -8.2 -9.4 0.0	30S
					26 27 117 .8 4.0 5.1 15.4 9.3 3.4 -49.2 -48.3 .9 -7.1 -8.0 0.0	40S

# APPENDIX E

Code:

AUTUMN  
5-10 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N				9 9 46 4.6 15.9 15.2 30.0 29.8 8.7 -54.8 -51.9 6.5 -6.9 -6.9 6.5	
50N	19 20 117 13.5 26.0 35.0 38.4 31.1 28.2 -51.0 -47.3 20.5 -7.8 -7.7 11.1		9 9 29 8.9 15.5 31.0 28.5 14.6 27.6 -53.2 -62.4 17.2 -7.7 -8.1 3.4	28 32 249 7.9 19.7 25.7 30.9 28.3 16.5 -51.3 -52.6 11.6 -7.8 -7.9 6.8	
40N	19 20 139 4.3 17.5 6.5 66.1 25.3 6.5 -50.5 -49.6 5.8 -7.3 -7.9 5.0		27 27 112 3.9 15.0 8.9 43.3 28.4 6.3 -51.4 -56.0 6.3 -7.6 -8.9 5.4	18 18 110 14.9 30.8 27.3 54.5 36.5 21.8 -52.9 -55.7 19.1 -8.0 -8.5 15.5	
30N	2 2 20 .1 .3 5.0 1.6 0.0 0.0 -56.8 -61.0 0.0 -8.0 -9.2 0.0	4 4 15 0.0 0.0 0.0 0.0 0.0 0.0 -57.5 0.0 0.0 -7.9 0.0 0.0		4 4 19 14.6 25.7 26.3 55.5 15.8 26.3 -47.9 -49.2 26.3 -8.0 -9.5 15.8	
20N					
10N					
0					
10S					
20S			1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -50.3 0.0 0.0 -7.5 0.0 0.0	7 7 26 0.0 0.0 0.0 0.0 0.0 0.0 -54.3 0.0 0.0 -8.4 0.0 0.0	
30S	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -45.0 0.0 0.0 -9.5 0.0 0.0		4 4 24 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 -7.3 0.0 0.0	13 13 58 11.4 26.2 19.0 60.2 26.0 17.2 -50.0 -50.0 15.5 -7.6 -7.7 15.5	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
5-10 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
	1 1 1 37.6 0.0 100.0 37.6 0.0 100.0 0.0 -52.0 100.0 0.0 -5.3 0.0	6 6 26 66.8 34.2 88.5 75.5 25.8 88.5 -51.3 -50.3 84.6 -6.5 -6.7 69.2	4 4 18 40.3 39.9 72.2 55.9 36.6 55.6 -53.8 -49.5 50.0 -6.0 -6.4 38.9	11 11 45 55.6 38.6 82.2 67.6 31.6 75.6 -52.9 -50.1 71.1 -6.2 -6.6 55.6		
						60N
4 4 15 7.9 16.8 26.7 29.5 20.6 20.0 -58.5 -46.0 13.3 -8.2 -6.3 6.7	4 4 30 13.9 24.9 46.7 29.7 29.3 26.7 -50.0 -52.3 16.7 -5.9 -5.5 13.3	20 20 137 16.3 30.6 30.7 53.1 33.1 25.5 -48.3 -49.3 21.9 -7.4 -6.7 17.5	72 76 484 14.9 26.9 40.9 36.5 31.3 29.8 -47.3 -48.6 21.1 -7.2 -7.4 13.2	109 113 712 14.3 27.0 37.2 38.5 32.0 27.2 -48.6 -49.0 19.9 -7.2 -7.2 13.5		
						50N
25 27 177 9.0 20.6 28.8 31.3 27.8 18.6 -53.6 -52.5 13.6 -7.6 -7.9 6.8	31 33 182 12.0 23.9 30.2 39.6 28.1 24.7 -52.2 -51.8 19.2 -7.5 -7.7 10.4	73 79 515 16.0 31.4 29.1 55.0 35.2 24.5 -48.1 -49.7 20.8 -7.1 -7.4 16.1	27 32 217 12.4 26.0 31.3 39.7 32.9 23.5 -50.9 -52.4 17.1 -7.1 -7.1 12.0	212 232 1486 12.5 26.3 29.5 42.3 33.0 22.7 -50.5 -51.2 17.6 -7.4 -7.6 11.5		
						40N
38 39 214 3.1 12.5 14.0 22.4 26.1 7.9 -51.4 -51.9 3.7 -7.8 -8.2 2.3	24 25 116 1.1 6.6 4.3 26.0 19.0 3.4 -52.0 -44.6 1.7 -8.2 -8.3 .9		1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -54.3 0.0 0.0 -7.9 0.0 0.0	127 130 694 5.0 18.0 12.1 41.2 34.3 8.8 -51.5 -53.1 6.6 -7.8 -8.4 5.2		
						30N
11 11 52 2.5 12.1 11.5 21.7 29.3 7.7 -54.9 -59.0 1.9 -8.4 -7.5 1.9				21 21 106 3.9 14.7 11.3 34.1 29.8 8.5 -54.7 -55.1 5.7 -8.2 -8.5 3.8		
						20N
						10N
						0
						10S
						20S
					8 8 32 0.0 0.0 0.0 0.0 0.0 0.0 -53.6 0.0 0.0 -8.3 0.0 0.0	
					18 18 83 8.0 22.5 13.3 60.2 26.0 12.0 -49.9 -50.0 10.8 -7.5 -7.7 10.8	
						40S

# APPENDIX E

Code:

WINTER  
0-5 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -68.9 0.0 0.0 -1.9 0.0 0.0
40N	25 29 239 14.2 28.9 29.7 47.8 34.8 23.4 -55.0 -60.5 18.0 -2.4 -2.7 15.5		2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -49.6 0.0 0.0 -1.0 0.0 0.0	4 5 36 0.0 0.0 0.0 0.0 0.0 0.0 -52.6 0.0 0.0 -2.6 0.0 0.0	
30N	28 32 281 6.7 20.2 16.7 40.0 33.2 12.8 -53.3 -54.5 8.5 -2.6 -3.3 6.8		32 32 125 6.6 19.5 14.4 45.7 29.0 12.0 -50.0 -55.7 10.4 -2.5 -3.8 5.6	14 20 200 4.4 17.5 10.0 43.5 36.7 7.5 -52.2 -54.7 5.5 -2.4 -3.7 3.5	
20N	5 5 25 7.0 12.5 32.0 21.8 12.8 24.0 -48.0 -58.0 12.0 -2.8 -2.5 0.0	8 8 33 2.4 13.6 3.0 79.6 0.0 3.0 -48.2 -54.0 3.0 -3.1 -4.8 3.0	2 2 11 0.0 0.0 0.0 0.0 0.0 0.0 -51.8 0.0 0.0 -3.1 0.0 0.0	5 6 47 11.5 20.0 42.6 27.0 22.8 31.9 -50.2 -48.9 21.3 -2.8 -3.8 8.5	
10N					
0					
10S					
20S					
30S					4 4 17 0.0 0.0 0.0 0.0 0.0 0.0 -63.7 0.0 0.0 -3.1 0.0 0.0
40S			5 5 39 .6 3.8 2.6 23.9 0.0 2.6 -53.3 -59.0 0.0 -4.0 -3.0 0.0	20 20 149 2.7 10.9 12.1 22.5 23.2 8.7 -58.0 -52.8 3.4 -3.0 -3.4 2.0	



# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
0-5 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
2 2 2 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 -7.7 0.0 0.0	2 2 12 4.8 12.3 16.7 29.0 14.1 16.7 -63.9 -66.0 8.3 -7.7 -3.3 0.0	3 3 12 43.2 33.6 75.0 57.6 25.9 75.0 -58.3 -61.1 58.3 -9 -1.4 50.0	5 5 25 0.0 0.0 0.0 0.0 0.0 0.0 -51.4 0.0 0.0 -1.7 0.0 0.0	12 12 51 11.3 24.9 21.6 52.4 26.6 21.6 -55.1 -62.0 15.7 -1.3 -1.2 11.8		
1 1 11 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 -5.5 0.0 0.0	4 4 31 7.6 22.1 16.1 47.1 34.3 12.9 -60.7 -56.6 9.7 -1.5 -2.4 9.7	13 14 104 23.4 34.9 41.3 56.6 32.6 36.5 -54.0 -61.8 30.8 -2.2 -2.7 24.0	37 38 246 14.2 28.4 30.5 46.5 33.9 23.6 -55.9 -59.9 19.9 -2.4 -2.6 13.8	56 58 400 15.4 29.8 30.8 50.1 33.8 25.0 -56.2 -60.5 21.0 -2.2 -2.6 15.5		60N
20 20 88 10.8 23.6 28.4 37.9 30.6 20.5 -55.3 -56.3 19.3 -2.1 -3.1 8.0	57 56 298 9.7 23.3 29.5 32.8 32.9 17.4 -56.4 -60.0 13.4 -1.7 -2.7 9.1	35 36 256 23.6 34.5 42.2 55.9 31.9 35.9 -54.1 -58.7 32.0 -2.1 -2.9 24.6	26 27 175 23.1 35.0 42.9 54.0 34.5 34.9 -55.6 -60.7 29.1 -3.0 -2.6 24.0	169 177 1097 15.8 29.9 33.5 47.2 34.4 25.4 -55.2 -59.6 21.2 -2.2 -2.8 16.0		50N
92 97 760 8.5 22.4 22.1 38.7 33.3 15.5 -55.6 -58.5 11.4 -2.4 -3.3 8.6	49 56 469 15.1 29.2 30.9 48.8 33.3 24.9 -57.8 -62.6 20.9 -2.3 -2.5 15.6	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -43.0 0.0 0.0 -4.7 0.0 0.0		216 238 1836 9.3 23.7 21.7 43.1 33.6 16.4 -54.9 -59.2 12.7 -2.4 -3.0 9.3		40N
44 45 271 4.5 17.1 9.6 47.2 32.3 7.7 -52.6 -56.2 5.9 -3.1 -3.1 4.8				64 66 387 5.2 16.9 14.2 36.7 29.3 11.1 -51.8 -53.8 7.8 -3.1 -3.3 4.7		30N
1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 -3.2 0.0 0.0				1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 -3.2 0.0 0.0		20N
						10N
						0
						10S
						20S
					4 4 17 0.0 0.0 0.0 0.0 0.0 0.0 -63.7 0.0 0.0 -3.1 0.0 0.0	30S
					25 25 188 2.3 9.9 10.1 22.6 22.6 7.4 -56.9 -53.2 2.7 -3.2 -3.3 1.6	40S

# APPENDIX E

Code:

SPRING  
0-5 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					
60N					
50N					9 10 72 12.1 23.5 27.8 43.4 25.2 25.0 -58.8 -62.1 20.8 -1.3 -1.5 12.5
40N	8 9 80 .3 2.5 5.0 6.6 9.2 1.3 -55.8 -50.3 0.0 -1.2 -3.1 0.0		14 14 61 3.2 13.2 11.5 27.9 29.0 8.2 -60.7 -58.7 4.9 -2.2 -3.6 1.6	34 40 379 6.0 19.3 14.0 43.2 32.6 11.1 -57.3 -60.9 7.7 -2.1 -2.7 6.3	
30N	12 13 146 5.2 17.0 16.4 31.9 30.2 11.0 -53.8 -55.8 7.5 -2.4 -1.9 3.4		39 40 183 9.9 25.9 21.9 45.1 38.5 14.8 -57.4 -60.4 12.6 -2.9 -2.9 9.8	20 20 92 13.2 27.0 26.1 50.4 30.2 22.8 -53.5 -56.4 19.6 -2.7 -2.8 15.2	
20N		5 5 21 .1 .7 4.8 3.1 0.0 0.0 -52.6 -49.0 0.0 -3.5 -4.8 0.0	4 4 11 0.0 0.0 0.0 0.0 0.0 0.0 -46.4 0.0 0.0 -3.2 0.0 0.0	2 2 30 6.6 17.2 26.7 24.7 25.9 13.3 -56.2 -57.3 10.0 -3.4 -4.3 3.3	
10N		1 1 7 0.0 0.0 0.0 0.0 0.0 0.0 -58.0 0.0 0.0 -3.7 0.0 0.0			
0					
10S					
20S					
30S					2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 -3.2 0.0 0.0
40S					8 8 42 0.0 0.0 0.0 0.0 0.0 0.0 -57.2 0.0 0.0 -2.6 0.0 0.0

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
0-5 KFT  
BELOW TROP

65W	120W	75W	30W	15E	ZONAL MEAN		
		1 1 7 .2 .5 14.3 1.6 0.0 0.0 -58.7 -59.0 0.0 -.5 -.7 0.0	1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -56.5 0.0 0.0 -2.4 0.0 0.0	2 2 11 .1 .5 9.1 1.6 0.0 0.0 -57.8 -59.0 0.0 -1.3 -.7 0.0		80N	
	2 2 13 0.0 0.0 0.0 0.0 0.0 0.0 -57.1 0.0 0.0 -1.8 0.0 0.0	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -58.0 0.0 0.0 -.1 0.0 0.0	3 3 28 24.7 37.2 35.7 69.2 28.0 32.1 -57.0 -57.0 32.1 -2.5 -3.0 28.6	6 6 42 16.5 32.5 23.8 69.2 28.0 21.4 -57.1 -57.0 21.4 -2.1 -3.0 19.0		70N	
10 10 79 5.0 15.7 19.0 26.1 27.2 8.9 -59.3 -63.1 7.6 -1.3 -2.2 3.8	16 18 174 3.0 12.2 15.5 19.1 25.6 5.7 -59.2 -59.5 4.6 -1.8 -3.1 2.3	27 28 169 13.0 27.9 29.0 44.9 35.5 22.5 -54.9 -56.5 16.6 -2.1 -2.9 13.0	42 43 287 8.8 22.0 27.5 31.9 31.9 17.4 -56.5 -56.5 11.5 -2.1 -2.7 8.4	104 109 781 8.3 21.7 24.3 34.2 32.3 15.7 -57.4 -58.1 11.5 -1.9 -2.6 7.9		60N	
48 53 415 5.6 17.2 20.2 27.9 29.1 12.5 -57.4 -59.7 8.2 -2.1 -3.5 4.6	122 129 805 12.6 26.4 27.8 45.4 31.7 23.1 -56.7 -60.2 18.1 -2.2 -2.7 12.5	50 54 381 11.2 24.5 29.1 38.3 31.9 21.8 -55.0 -57.3 16.8 -2.3 -3.1 10.0	13 14 72 6.1 17.0 22.2 27.3 26.7 13.9 -53.4 -57.9 9.7 -2.5 -3.2 4.2	289 313 2193 9.0 22.5 22.8 39.5 32.0 17.3 -56.6 -59.4 12.9 -2.2 -3.0 8.5		50N	
119 128 911 2.6 10.9 13.6 19.1 23.6 5.9 -57.8 -60.3 4.0 -2.7 -2.9 1.8	100 106 663 9.3 23.5 20.5 45.5 32.2 17.0 -57.0 -61.3 13.4 -2.1 -2.7 9.0	6 6 23 8.9 27.6 13.0 68.0 42.5 8.7 -52.9 -67.3 8.7 -2.3 -3.2 8.7		296 313 2018 6.2 19.3 17.4 35.7 32.8 11.5 -57.0 -60.2 8.9 -2.5 -2.7 5.7		40N	
52 58 507 4.6 16.9 12.0 37.9 33.1 8.1 -56.9 -57.3 6.3 -2.8 -2.7 4.1	4 4 15 0.0 0.0 0.0 0.0 0.0 0.0 -52.9 0.0 0.0 -3.0 0.0 0.0	2 2 6 .1 .3 16.7 .8 0.0 0.0 -64.0 -66.0 0.0 -2.5 -4.4 0.0		69 75 590 4.3 16.2 12.0 35.4 32.7 7.6 -56.5 -57.3 5.9 -2.8 -2.9 3.7		30N	
1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -63.0 0.0 0.0 -4.8 0.0 0.0				2 2 8 0.0 0.0 0.0 0.0 0.0 0.0 -58.6 0.0 0.0 -3.9 0.0 0.0		20N	
						10N	
						0	
						10S	
						20S	
					2 2 7 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 -3.2 0.0 0.0		30S
					8 8 42 0.0 0.0 0.0 0.0 0.0 0.0 -57.2 0.0 0.0 -2.6 0.0 0.0		40S

# APPENDIX E

Code:

SUMMER  
0-5 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					1 1 9 3.2 9.1 11.1 29.0 0.0 11.1 -57.0 -58.0 11.1 -2.8 -4.4 0.0
60N					7 7 41 1.3 4.4 19.5 6.5 8.0 4.9 -53.9 -59.5 0.0 -1.4 -1.5 0.0
50N	12 12 69 1.9 11.8 4.3 43.1 37.5 2.9 -50.0 -47.7 2.9 -2.1 -3.4 1.4		9 9 35 0.0 0.0 0.0 0.0 0.0 0.0 -57.1 0.0 0.0 -3.6 0.0 0.0	28 30 243 4.4 14.2 15.6 28.0 25.1 10.7 -54.8 -57.6 6.6 -2.2 -2.8 3.7	
40N	3 3 6 0.0 0.0 0.0 0.0 0.0 0.0 -52.5 0.0 0.0 -3.8 0.0 0.0		7 7 38 6.9 17.2 21.1 32.7 23.7 13.2 -57.6 -54.5 13.2 -3.5 -4.1 5.3		
30N					
20N					
10N					
0					
10S					
20S			1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -48.7 0.0 0.0 -1.7 0.0 0.0	1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -45.3 0.0 0.0 -4.3 0.0 0.0	
30S			18 19 97 1.4 9.5 6.2 22.0 31.8 3.1 -50.7 -53.7 1.0 -2.7 -2.8 1.0	9 9 63 .2 1.3 3.2 6.3 3.9 1.6 -52.3 -53.0 0.0 -2.9 -3.6 0.0	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
0-5 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						30N
						70N
4 6 65 1.8 8.8 15.4 11.5 19.9 3.1 -58.3 -61.1 3.1 -2.1 -1.7 1.5	2 2 22 5.1 17.0 27.3 18.6 28.4 13.6 -56.3 -56.0 4.5 -.8 -.6 4.5		2 2 14 0.0 0.0 0.0 0.0 0.0 0.0 -57.0 0.0 0.0 -2.1 0.0 0.0	9 11 110 2.3 10.6 15.5 15.0 23.3 5.5 -57.6 -59.1 3.6 -1.9 -1.4 1.8		
12 13 71 5.5 15.1 25.4 21.8 23.5 11.3 -55.3 -55.7 8.5 -1.9 -2.7 1.4	26 27 126 4.3 14.7 16.7 25.9 27.0 8.7 -54.9 -56.7 6.3 -1.7 -1.5 4.0	5 5 21 1.5 2.5 33.3 4.4 2.4 0.0 -54.5 -52.0 0.0 -1.3 -3.5 0.0	36 38 132 3.6 11.0 20.5 17.6 18.5 9.1 -53.6 -52.4 6.1 -2.2 -2.5 .8	86 90 391 3.8 12.5 20.7 18.4 21.9 8.4 -54.4 -54.9 5.6 -1.9 -2.3 1.8		60N
31 34 236 5.2 15.4 16.1 32.4 24.2 12.3 -55.6 -58.6 8.1 -2.6 -3.2 3.4	51 52 306 8.1 20.2 21.6 37.4 28.3 16.0 -54.2 -57.9 12.4 -2.7 -2.3 6.9	14 19 154 6.6 18.0 26.6 24.6 27.7 16.9 -53.5 -54.3 7.1 -2.3 -2.5 5.2	8 8 60 5.7 16.6 15.0 37.8 24.9 13.3 -55.7 -48.7 10.0 -1.8 -3.2 3.3	153 164 1103 5.7 16.8 17.7 32.0 27.3 12.7 -54.4 -56.6 8.3 -2.5 -2.7 4.4		50N
30 33 241 4.4 14.4 11.6 37.6 23.1 9.5 -53.7 -54.7 7.9 -3.4 -2.7 2.9	19 20 114 4.8 16.4 14.0 34.4 30.1 8.8 -53.3 -57.9 7.0 -2.1 -2.7 5.3			59 63 399 4.7 15.2 13.0 35.9 25.6 9.5 -53.9 -55.6 8.0 -3.1 -2.9 3.8		40N
5 5 18 1.0 3.5 16.7 6.3 6.4 5.6 -52.6 -51.7 0.0 -3.8 -3.3 0.0				5 5 18 1.0 3.5 16.7 6.3 6.4 5.6 -52.6 -51.7 0.0 -3.8 -3.3 0.0		30N
						20N
						10N
						0
						10S
						20S
					2 2 6 0.0 0.0 0.0 0.0 0.0 0.0 -47.0 0.0 0.0 -3.0 0.0 0.0	30S
					27 28 160 .9 7.5 5.0 18.0 28.5 2.5 -51.4 -53.5 .6 -2.8 -3.0 .6	40S

# APPENDIX E

Code:

AUTUMN  
0-5 KFT  
BELOW TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N					1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 -1.6 0.0 0.0
60N					13 14 87 5.6 19.7 11.5 48.7 35.8 8.0 -53.0 -55.9 6.9 -2.4 -3.0 5.7
50N	14 16 116 2.5 10.8 11.2 21.9 24.6 6.0 -53.5 -55.9 3.4 -2.7 -2.7 2.6		11 11 52 0.0 0.0 0.0 0.0 0.0 0.0 -56.7 0.0 0.0 -2.6 0.0 0.0	23 26 280 1.8 10.9 6.8 26.5 32.9 2.9 -54.9 -57.4 1.8 -2.6 -3.0 1.4	
40N	16 18 144 2.7 11.7 8.3 32.2 26.4 6.3 -55.1 -58.8 4.9 -3.3 -3.6 2.1		15 15 62 0.0 0.0 0.0 0.0 0.0 0.0 -53.5 0.0 0.0 -3.1 0.0 0.0	7 7 60 0.0 0.0 0.0 0.0 0.0 0.0 -56.5 0.0 0.0 -3.0 0.0 0.0	
30N		2 2 13 1.7 5.9 7.7 22.0 0.0 7.7 -59.3 -58.0 0.0 -2.5 -2.7 0.0		2 2 8 0.0 0.0 0.0 0.0 0.0 0.0 -58.6 0.0 0.0 -2.2 0.0 0.0	
20N					
10N					
0					
10S					
20S			1 1 9 0.0 0.0 0.0 0.0 0.0 0.0 -50.7 0.0 0.0 -2.8 0.0 0.0	2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 -1.8 0.0 0.0	
30S	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -55.5 0.0 0.0 -4.2 0.0 0.0		2 2 28 .0 .1 3.6 .8 0.0 0.0 -53.7 -61.0 0.0 -2.2 -2.4 0.0	11 13 75 1.7 10.5 4.0 41.8 32.5 2.7 -51.2 -56.0 2.7 -2.2 -3.5 1.3	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
0-5 KFT  
BELOW TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
						80N
						70N
4 4 34 .7 2.9 5.9 12.2 0.0 5.9 -57.1 -57.0 0.0 -1.1 -3.1 0.0	7 7 39 21.7 31.8 53.8 40.3 33.5 41.0 -56.7 -54.9 28.2 -1.1 -2.7 17.9	9 9 68 30.2 37.4 48.5 62.2 29.9 44.1 -51.7 -55.2 41.2 -2.0 -2.1 32.4	9 9 61 7.1 17.3 19.7 36.0 22.0 18.0 -52.6 -53.2 13.1 -1.7 -3.2 6.6	30 30 203 16.5 29.9 33.5 49.3 32.3 29.1 -53.9 -54.8 23.2 -1.5 -2.5 16.3		
11 11 77 5.9 12.7 24.7 23.9 15.0 19.5 -58.3 -58.9 11.7 -1.8 -2.2 0.0	16 20 180 8.9 21.3 23.3 38.1 28.9 17.8 -55.7 -55.8 14.4 -1.6 -2.5 7.2	54 56 512 8.4 22.9 17.0 49.2 32.7 14.1 -50.5 -58.1 11.5 -2.1 -2.5 9.2	76 87 800 3.0 21.0 22.1 36.2 31.2 16.4 -52.4 -57.6 11.1 -2.6 -2.9 7.1	170 188 1656 8.0 21.3 20.2 39.5 31.5 15.5 -52.4 -57.5 11.4 -2.3 -2.7 7.4		60N
25 30 243 5.3 16.1 22.2 24.1 26.8 12.8 -57.1 -63.1 8.2 -2.2 -2.6 4.5	29 30 199 3.6 13.3 15.1 24.2 26.1 9.5 -54.8 -54.8 5.0 -2.1 -3.8 3.0	72 82 738 10.7 25.8 23.8 45.1 35.4 17.9 -53.1 -58.5 14.4 -2.5 -3.3 10.2	19 21 170 7.7 21.1 18.2 42.4 31.2 15.3 -54.1 -55.7 11.2 -3.2 -3.3 5.9	193 216 1798 6.7 20.3 18.0 37.3 33.8 12.4 -54.4 -58.5 9.1 -2.5 -3.2 6.1		50N
23 23 96 .7 6.6 2.1 33.3 32.2 1.0 -54.7 -52.0 1.0 -3.0 -4.3 1.0	12 13 60 1.1 6.2 3.3 31.8 12.9 3.3 -56.1 -56.5 1.7 -2.4 -1.1 0.0			73 76 422 1.2 8.0 3.8 32.3 26.0 2.8 -55.1 -57.7 2.1 -3.0 -3.4 .9		40N
2 2 3 0.0 0.0 0.0 0.0 0.0 0.0 -56.7 0.0 0.0 -2.1 0.0 0.0				6 6 24 .9 4.4 4.2 22.0 0.0 4.2 -58.7 -58.0 0.0 -2.3 -2.7 0.0		30N
						20N
						10N
						0
						10S
						20S
					3 3 14 0.0 0.0 0.0 0.0 0.0 0.0 -50.4 0.0 0.0 -2.5 0.0 0.0	30S
					14 16 105 1.2 8.9 3.8 31.6 33.3 1.9 -51.9 -57.3 1.9 -2.3 -3.2 1.0	40S

# APPENDIX E

Code:

WINTER  
0-5 KFT  
ABOVE TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				2 2 10 0.0 0.0 0.0 0.0 0.0 0.0 -48.8 0.0 0.0 4.4 0.0 0.0	
60N				9 11 118 0.0 0.0 0.0 0.0 0.0 0.0 -50.8 0.0 0.0 3.7 0.0 0.0	
50N	10 11 62 2.7 11.0 9.7 28.0 23.3 8.1 -58.6 -62.2 3.2 .7 .8 1.6		2 2 16 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 3.0 0.0 0.0	7 10 75 0.0 0.0 0.0 0.0 0.0 0.0 -49.8 0.0 0.0 3.5 0.0 0.0	
40N	12 12 102 0.0 0.0 0.0 0.0 0.0 0.0 -54.7 0.0 0.0 1.5 0.0 0.0		14 14 77 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 2.3 0.0 0.0	9 13 145 0.0 0.0 0.0 0.0 0.0 0.0 -50.3 0.0 0.0 2.5 0.0 0.0	
30N	2 2 12 0.0 0.0 0.0 0.0 0.0 0.0 -53.3 0.0 0.0 1.6 0.0 0.0		1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -46.0 0.0 0.0 1.1 0.0 0.0	1 1 10 0.0 0.0 0.0 0.0 0.0 0.0 -47.5 0.0 0.0 1.6 0.0 0.0	
20N					
10N					
0					
10S					
20S				1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 1.1 0.0 0.0	
30S				10 11 68 0.0 0.0 0.0 0.0 0.0 0.0 -55.4 0.0 0.0 2.3 0.0 0.0	
40S					



# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

WINTER  
0-5 KFT  
ABOVE TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
		1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 2.7 0.0 0.0			1 1 6 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 2.7 0.0 0.0	80N
7 10 93 0.0 0.0 0.0 0.0 0.0 0.0 -55.4 0.0 0.0 3.5 0.0 0.0	10 11 94 1.2 8.2 2.1 54.7 14.3 2.1 -59.5 -69.5 2.1 2.5 2.3 1.1	8 10 120 1.4 7.5 5.0 27.8 19.9 5.0 -55.2 -60.3 .8 2.2 .6 .8	5 5 48 .4 2.5 2.1 17.6 0.0 2.1 -54.4 -56.0 0.0 1.8 .6 0.0	32 38 365 .8 6.1 2.5 32.6 21.4 2.5 -56.1 -61.9 .8 2.6 .9 .5		70N
9 12 123 0.0 0.0 0.0 0.0 0.0 0.0 -51.0 0.0 0.0 3.4 0.0 0.0	12 18 189 .2 2.2 .5 30.6 0.0 .5 -55.3 -55.0 .5 3.0 0.0 0.0	20 22 194 8.7 26.1 12.9 67.7 35.8 10.8 -52.5 -60.6 9.8 2.4 .7 9.3	30 35 312 .5 4.3 3.2 15.4 18.6 1.3 -53.2 -60.7 1.0 2.3 1.1 .3	80 98 936 2.0 12.6 3.8 52.1 39.3 2.8 -52.9 -60.5 2.5 2.8 .8 2.0		60N
22 23 165 2.5 12.5 7.3 34.0 32.8 4.8 -54.2 -63.2 3.6 2.3 1.7 1.8	65 72 592 1.6 9.9 4.6 35.2 30.9 3.2 -54.4 -63.7 2.5 2.5 1.5 1.4	28 37 332 1.1 8.7 2.4 44.9 34.4 1.8 -50.7 -60.3 1.5 2.2 1.4 1.2	20 22 157 .6 6.5 1.9 33.7 33.3 1.3 -53.9 -61.0 .6 2.0 .7 .6	154 177 1399 1.4 9.4 4.0 35.5 31.6 2.9 -53.3 -62.8 2.1 2.3 1.4 1.2		50N
42 46 368 .7 6.0 1.9 36.6 23.4 1.6 -55.1 -66.6 1.1 2.2 2.0 .5	37 43 357 .2 1.9 1.1 14.3 10.8 .8 -56.2 -62.3 .3 2.3 .2 0.0			114 128 1049 .3 3.7 1.0 28.5 22.5 .9 -54.5 -65.0 .5 2.2 1.3 .2		40N
11 11 76 0.0 0.0 0.0 0.0 0.0 0.0 -52.6 0.0 0.0 1.6 0.0 0.0				15 15 100 0.0 0.0 0.0 0.0 0.0 0.0 -52.0 0.0 0.0 1.6 0.0 0.0		30N
						20N
						10N
						0
						10S
						20S
				1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -54.5 0.0 0.0 1.1 0.0 0.0		30S
				10 11 68 0.0 0.0 0.0 0.0 0.0 0.0 -55.4 0.0 0.0 2.3 0.0 0.0		40S

# APPENDIX E

Code:

SPRING  
0-5 KFT  
ABOVE TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				2 2 4 0.0 0.0 0.0 0.0 0.0 0.0 -54.3 0.0 0.0 3.3 0.0 0.0	
60N				34 45 487 2.1 12.0 4.3 47.9 33.8 3.3 -54.1 -62.8 2.9 3.0 1.0 2.1	
50N	9 9 60 5.1 16.6 15.0 34.2 29.1 10.0 -56.0 -56.8 6.7 1.6 1.1 6.7		16 16 91 0.0 0.0 0.0 0.0 0.0 0.0 -55.1 0.0 0.0 2.6 0.0 0.0	41 46 469 1.9 11.4 4.7 41.0 34.3 3.4 -55.3 -61.1 2.6 2.5 2.2 2.1	
40N	6 7 57 .7 3.1 7.0 9.7 7.3 1.8 -56.7 -57.0 0.0 1.1 .7 0.0		23 23 103 .9 5.2 4.9 19.3 14.5 2.9 -55.6 -61.4 1.9 2.7 1.8 0.0	11 11 76 3.1 15.5 6.6 47.5 39.2 3.9 -52.1 -56.8 3.9 2.0 1.2 3.9	
30N			1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -45.8 0.0 0.0 .6 0.0 0.0		
20N					
10N					
0					
10S					
20S				1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -54.2 0.0 0.0 1.5 0.0 0.0	
30S				9 10 72 0.0 0.0 0.0 0.0 0.0 0.0 -58.6 0.0 0.0 2.1 0.0 0.0	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SPRING  
0-5 KFT  
ABOVE TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
	1 1 8 0.0 0.0 0.0 0.0 0.0 0.0 -58.8 0.0 0.0 2.4 0.0 0.0	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -60.0 0.0 0.0 0.0 0.0 0.0	1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -59.5 0.0 0.0 .3 0.0 0.0	3 3 12 0.0 0.0 0.0 0.0 0.0 0.0 -59.1 0.0 0.0 1.6 0.0 0.0		80N
10 13 110 0.0 0.0 0.0 0.0 0.0 0.0 -51.4 0.0 0.0 3.2 0.0 0.0	13 13 87 .0 .1 3.4 .4 0.0 0.0 -53.7 -53.3 0.0 2.7 2.9 0.0	6 6 68 .0 .2 5.9 .7 .5 0.0 -52.7 -57.8 0.0 3.0 2.8 0.0	3 3 20 0.0 0.0 0.0 0.0 0.0 0.0 -51.9 0.0 0.0 3.1 0.0 0.0	34 37 289 .0 .1 2.4 .6 .4 0.0 -52.4 -55.9 0.0 3.0 2.8 0.0		70N
25 27 283 .0 .2 .7 1.8 1.4 0.0 -52.8 -61.5 0.0 2.9 1.4 0.0	23 26 266 .0 .1 1.1 .5 .2 0.0 -55.7 -56.0 0.0 2.6 1.5 0.0	30 30 198 3.1 15.2 7.6 40.8 39.0 4.5 -52.6 -62.6 3.5 2.4 1.9 3.0	39 42 382 1.5 8.6 5.8 25.9 25.7 3.7 -52.5 -62.7 2.1 2.5 1.2 1.0	151 170 1616 1.4 9.5 3.9 34.8 34.0 2.4 -53.6 -62.4 1.8 2.7 1.3 1.2		60N
48 57 531 .5 5.1 1.9 25.1 27.5 .9 -56.3 -62.3 .8 2.1 1.6 .4	97 103 754 2.4 11.9 6.4 37.5 29.9 4.9 -55.4 -62.8 3.4 2.2 1.6 2.1	33 34 202 1.3 8.2 5.9 21.4 26.5 3.0 -51.9 -54.5 1.5 2.3 2.0 1.0	13 15 107 .9 8.3 1.9 50.6 34.5 1.9 -51.7 -59.0 .9 2.6 1.6 .9	257 280 2214 1.6 10.0 4.7 35.1 31.1 3.3 -55.1 -60.8 2.3 2.3 1.7 1.6		50N
60 62 393 .9 7.4 3.8 22.6 30.8 1.5 -55.7 -61.9 1.0 2.0 1.0 1.0	84 97 743 2.0 12.2 4.0 49.2 37.2 3.0 -56.6 -62.9 2.6 2.2 1.1 2.2	5 5 26 .0 .1 3.8 .4 0.0 0.0 -56.7 -38.0 0.0 2.2 2.0 0.0		189 205 1398 1.6 10.5 4.3 36.4 36.2 2.5 -56.0 -61.2 2.0 2.1 1.1 1.6		40N
13 15 83 1.5 7.9 6.0 24.2 21.8 3.6 -58.0 -61.8 1.2 1.3 .4 1.2	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 .2 0.0 0.0	1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -63.5 0.0 0.0 .7 0.0 0.0		16 18 93 1.3 7.4 5.4 24.2 21.8 3.2 -57.6 -61.8 1.1 1.3 .4 1.1		30N
						20N
						10N
						0
						10S
						20S
				1 1 5 0.0 0.0 0.0 0.0 0.0 0.0 -54.2 0.0 0.0 1.5 0.0 0.0		30S
				9 10 72 0.0 0.0 0.0 0.0 0.0 0.0 -58.6 0.0 0.0 2.1 0.0 0.0		40S

# APPENDIX E

Code:

SUMMER  
0-5 KFT  
ABOVE TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				5 5 25 0.0 0.0 0.0 0.0 0.0 0.0 -51.6 0.0 0.0 2.4 0.0 0.0	
60N				18 24 263 .7 4.4 4.2 16.8 14.0 2.3 -51.1 -59.7 .8 2.9 1.1 0.0	
50N	6 6 35 .7 3.1 5.7 12.9 3.5 2.9 -50.3 -54.0 0.0 1.7 .5 0.0		2 2 12 0.0 0.0 0.0 0.0 0.0 0.0 -54.9 0.0 0.0 2.0 0.0 0.0	24 24 143 .0 .4 .7 4.3 0.0 0.0 -53.8 -64.0 0.0 1.9 0.0 0.0	
40N					
30N					
20N					
10N					
0					
10S					
20S			1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 .7 0.0 0.0		
30S			11 12 95 0.0 0.0 0.0 0.0 0.0 0.0 -48.6 0.0 0.0 1.9 0.0 0.0	3 3 28 .0 .1 3.6 .4 0.0 0.0 -51.1 -54.0 0.0 3.0 4.7 0.0	
40S					

# APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

SUMMER  
0-5 KFT  
ABOVE TROP

165W	120W	75W	30W	15E	ZONAL MEAN	
	1 1 1 0.0 0.0 0.0 0.0 0.0 0.0 -48.0 0.0 0.0 5.0 0.0 0.0	1 1 3 0.0 0.0 0.0 0.0 0.0 0.0 -44.0 0.0 0.0 4.8 0.0 0.0	1 1 7 .1 .1 14.3 .4 0.0 0.0 -44.5 -45.0 0.0 4.6 4.7 0.0	3 3 11 .0 .1 9.1 .4 0.0 0.0 -44.7 -45.0 0.0 4.7 4.7 0.0		60N
10 12 144 0.0 0.0 0.0 0.0 0.0 0.0 -53.1 0.0 0.0 2.3 0.0 0.0	27 29 243 .0 .1 .8 1.2 .8 0.0 -49.5 -53.0 0.0 3.1 2.0 0.0	18 18 151 0.0 0.0 0.0 0.0 0.0 0.0 -50.2 0.0 0.0 3.9 0.0 0.0	20 20 187 .0 .3 .5 3.5 0.0 0.0 -51.1 -65.0 0.0 3.3 1.8 0.0	80 84 750 .0 .1 .4 2.0 1.3 0.0 -50.8 -57.0 0.0 3.2 1.9 0.0		70N
14 19 176 .2 1.5 1.7 11.0 3.9 1.1 -50.5 -58.3 0.0 2.8 .2 0.0	38 46 437 .3 4.3 1.6 21 6 26.8 .7 -51.4 -58.3 .5 2.7 .8 .2	14 15 134 .3 2.3 3.0 10.3 8.8 1.5 -53.2 -60.8 0.0 2.7 1.5 0.0	37 41 331 .1 .7 2.1 3.8 3.2 .3 -53.6 -59.1 0.0 2.9 1.8 0.0	121 145 1341 .3 3.3 2.4 13.6 16.7 1.0 -51.9 -59.3 .3 2.8 1.2 .1		60N
21 21 127 2.0 12.1 7.1 28.1 36.4 3.9 -54.2 -63.2 1.6 1.9 2.6 1.6	36 38 238 1.5 8.3 5.5 27.7 23.4 3.8 -54.5 -60.2 2.9 2.0 .9 .8	11 11 105 1.3 6.7 7.6 17.2 17.8 3.8 -53.5 -55.9 1.9 2.6 1.0 1.0	8 8 39 1.1 4.9 7.7 14.4 10.7 5.1 -53.5 -54.0 2.6 1.9 .4 0.0	108 110 699 1.2 7.7 5.2 22.9 25.6 3.0 -53.9 -59.2 1.7 2.0 1.3 .7		50N
10 10 54 .9 6.7 1.9 49.8 0.0 1.9 -54.5 -55.0 1.9 2.4 .3 0.0	10 10 63 .1 .7 1.6 5.5 0.0 0.0 -51.0 -56.0 0.0 2.2 1.1 0.0			20 20 117 .5 4.6 1.7 27.6 22.2 .9 -52.6 -55.5 .9 2.3 .7 0.0		40N
						30N
						20N
						10N
						0
						10S
						20S
				1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -50.0 0.0 0.0 .7 0.0 0.0		30S
				14 15 123 .0 .0 .8 .4 0.0 0.0 -49.2 -54.0 0.0 2.2 4.7 0.0		40S

# APPENDIX E

Code:

AUTUMN  
0-5 KFT  
ABOVE TROP

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

	15E	60E	105E	150E	165W
80N					
70N				3 3 5 0.0 0.0 0.0 0.0 0.0 0.0 -49.4 0.0 0.0 4.5 0.0 0.0	
60N				16 20 246 .0 .0 .4 .4 0.0 0.0 -53.7 -57.0 0.0 2.8 1.1 0.0	
50N	5 7 72 0.0 0.0 0.0 0.0 0.0 0.0 -56.7 0.0 0.0 2.3 0.0 0.0		10 10 47 0.0 0.0 0.0 0.0 0.0 0.0 -53.2 0.0 0.0 1.9 0.0 0.0	20 21 194 .0 .2 .5 2.7 0.0 0.0 -53.7 -51.0 0.0 2.2 1.0 0.0	
40N	5 5 50 0.0 0.0 0.0 0.0 0.0 0.0 -54.0 0.0 0.0 1.9 0.0 0.0		3 3 7 0.0 0.0 0.0 0.0 0.0 0.0 -49.9 0.0 0.0 .7 0.0 0.0	2 2 5 0.0 0.0 0.0 0.0 0.0 0.0 -57.4 0.0 0.0 1.2 0.0 0.0	
30N				1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -60.0 0.0 0.0 .3 0.0 0.0	
20N					
10N					
0					
10S					
20S					
30S				2 2 4 0.0 0.0 0.0 0.0 0.0 0.0 -48.3 0.0 0.0 1.6 0.0 0.0	
40S				8 8 57 .0 .1 5.3 .5 .2 0.0 -51.2 -52.0 0.0 3.0 3.1 0.0	

## APPENDIX E

$N_{\text{Flights}}$	$N_{\text{Indep. obs.}}$	$N_{\text{Total obs.}}$
$\overline{\text{TIC}} \%$	$\text{SIGMA}_{\text{TIC}}$	$P(\text{TIC} > 0 \%)$
$\text{TICIV} \%$	$\text{SIGMA}_{\text{TICIV}}$	$P(\text{TIC} \geq 10 \%)$
$\overline{\text{T}}_{\text{CLEAR}}$	$\overline{\text{T}}_{\text{CLOUD}}$	$P(\text{TIC} \geq 25 \%)$
$\overline{\Delta Z}_{\text{CLEAR}}$	$\overline{\Delta Z}_{\text{CLOUD}}$	$P(\text{TIC} \geq 50 \%)$

AUTUMN  
0-5 KFT  
ABOVE TROP

155W	120W	75W	30W	15E	ZONAL MEAN	
1 0.0 0.0 0.0 0 0 0.0 0.0 -52.0 0.0 0.0 4.3 0.0 0.0	1 1 4 0.0 0.0 0.0 0.0 0.0 0.0 -63.5 0.0 0.0 4.7 0.0 0.0	4 4 33 .0 .1 3.0 .4 0.0 0.0 -57.4 -62.0 0.0 2.9 .6 0.0			6 6 39 .0 .1 2.6 .4 0.0 0.0 -57.7 -62.0 0.0 3.2 .6 0.0	80N
10 15 168 .3 2.6 1.2 23.1 6.3 1.2 -53.6 -58.0 .6 2.7 .3 0.0	18 18 160 .3 2.6 1.3 20.0 11.4 .6 -54.5 -56.5 .6 3.2 .4 0.0	12 13 107 2.2 12.6 4.7 47.7 35.1 2.8 -51.3 -57.4 2.8 2.3 1.2 2.8	10 13 98 1.9 7.6 7.1 25.1 13.3 6.1 -51.7 -58.1 4.1 2.6 1.2 0.0	53 62 538 .9 6.9 3.0 31.7 24.6 2.2 -53.0 -57.7 1.7 2.8 1.0 .6		70N
16 17 154 .1 1.1 1.3 9.2 2.9 .6 -51.7 -49.5 0.0 2.7 .3 0.0	18 21 197 .6 4.9 2.5 24.5 19.1 1.5 -54.2 -61.8 1.5 2.4 1.5 0.0	50 61 576 1.0 8.0 1.9 50.4 29.2 1.7 -50.4 -60.1 1.4 2.3 .7 1.0	52 54 446 .5 3.8 2.7 18.9 13.6 1.6 -52.2 -59.2 1.1 2.2 .5 0.0	152 173 1619 .6 5.5 1.9 29.8 26.3 1.3 -52.0 -59.2 1.0 2.4 .7 .4		60N
26 32 301 .5 4.1 4.0 11.7 17.3 1.0 -56.3 -62.5 .7 1.8 .8 .3	20 21 167 1.5 9.2 4.2 36.2 27.4 3.6 -54.7 -62.3 2.4 2.2 2.4 1.2	46 51 421 .8 6.0 2.4 33.5 20.8 2.1 -52.8 -63.3 1.4 2.2 .4 .7	5 5 28 .4 2.1 3.6 11.4 0.0 3.6 -57.0 -62.0 0.0 1.7 .4 0.0	132 147 1230 .6 5.3 2.5 23.9 23.8 1.5 -54.4 -62.3 1.0 2.1 1.0 .5		50N
8 8 40 0.0 0.0 0.0 0.0 0.0 0.0 -58.9 0.0 0.0 1.3 0.0 0.0	8 8 42 0.0 0.0 0.0 0.0 0.0 0.0 -51.5 0.0 0.0 1.3 0.0 0.0		1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -59.0 0.0 0.0 .8 0.0 0.0	27 27 146 0.0 0.0 0.0 0.0 0.0 0.0 -54.6 0.0 0.0 1.5 0.0 0.0		40N
1 1 2 0.0 0.0 0.0 0.0 0.0 0.0 -62.5 0.0 0.0 .6 0.0 0.0				2 2 4 0.0 0.0 0.0 0.0 0.0 0.0 -61.3 0.0 0.0 .4 0.0 0.0		30N
						20N
						10N
						0
						10S
						20S
				2 2 4 0.0 0.0 0.0 0.0 0.0 0.0 -48.3 0.0 0.0 1.6 0.0 0.0		30S
				8 8 57 .0 .1 5.3 .5 .2 0.0 -51.2 -52.0 0.0 3.0 3.1 0.0		40S







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16. Abstract  Summary studies are presented for the entire cloud observation archive from the NASA Global Atmospheric Sampling Program (GASP). Studies are also presented for GASP particle-concentration data gathered concurrently with the cloud observations. Cloud encounters are shown on about 15 percent of the data samples overall, but the probability of cloud encounter is shown to vary significantly with altitude, latitude, and distance from the tropopause. Several meteorological circulation features are apparent in the latitudinal distribution of cloud cover, and the cloud-encounter statistics are shown to be consistent with the classical mid-latitude cyclone model. Observations of clouds spaced more closely than 90 minutes are shown to be statistically dependent. The statistics for cloud and particle encounter are utilized to estimate the frequency of cloud encounter on long-range airline routes, and to assess the probability and extent of laminar flow loss due to cloud or particle encounter by aircraft utilizing laminar flow control (LFC). It is shown that the probability of extended cloud encounter is too low, of itself, to make LFC impractical. This report is presented in two volumes. Volume I contains the narrative, analysis, and conclusions. Volume II contains five supporting appendixes.					
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